

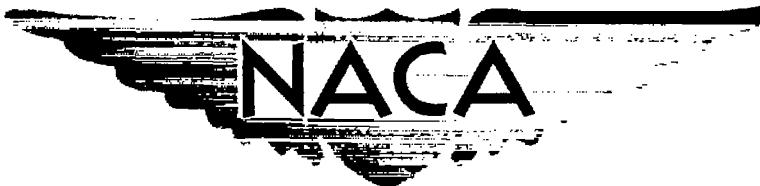
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RESEARCH MEMORANDUM

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INVESTIGATION AT TRANSONIC SPEEDS
OF LOADING OVER A 30° SWEPTBACK WING OF ASPECT
RATIO 3, TAPER RATIO 0.2, AND NACA 65A004 AIRFOIL
SECTION MOUNTED ON A BODY

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NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

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RESEARCH MEMORANDUM

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SUMMARY

The aerodynamic load characteristics of a wing-body combination were determined experimentally from 0.80 to 1.03 Mach number for angles of attack up to 26 degrees. Two wings, both with 30° sweep of the quarter-chord line, taper ratio 0.2, aspect ratio 3, and thickness of 4 percent chord, but of different types of construction, were tested. One wing was of solid steel and the other was of plastic with an inner steel core.

The load distributions for both wings were similar, but loads on the more flexible wing were somewhat reduced. The twist distributions for both wings were calculated. Some typical flow studies of the boundary layer are presented.

INTRODUCTION

Satisfactory stability characteristics have been obtained at subsonic speeds for thin low-aspect-ratio wings with moderate leading-edge sweep (ref. 1). In order to evaluate in detail the load and stability characteristics of this type of wing on a body of revolution throughout the transonic speed range, a wing with an aspect ratio of 3, a taper ratio of 0.2, 30° sweepback of the quarter-chord line, and with NACA 65A004 airfoil sections was selected and the load characteristics are presented. The longitudinal stability characteristics are presented in reference 2. This wing is one of several wings being studied in a general program at the Wrigley 16-foot transonic tunnel. To date, the load characteristics of other wings in the program have been published in references 3, 4, 5, and 6. Data were obtained at Mach numbers from 0.80

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to 1.03 for angles of attack up to about 26° for two wings of the same geometry but constructed of different materials. One wing was made of steel and plastic in an attempt to devise a cheaper and faster method of wing construction. The other was a solid steel wing used for tom. parison to check the effect of aeroelasticity and to establish the valid. ity of data obtained with the less-rigid reinforced plastic wing. The twist distribution due-to aerodynamic loading was calculated for both wings. Some typical flow studies of the boundary layer-are also presented.

SYMBOLS

b	wing span
c	wing chord parallel to the plane of symmetry
\bar{c}	average wing chord
c'	mean aerodynamic chord
C_n	wing section normal-force coefficient
c_m	section pitching-moment coefficient about the wing mean aero-dynamic chord
C_N	wing-panel normal-force coefficient-, $\int_{0.16}^{1.0} C_n \frac{c}{\bar{c}} d\left(\frac{2y}{b}\right)$
c_m	wing-panel pitching-moment coefficient about $0.25c'$, $\int_{0.16}^{1.0} c_m \frac{c^2}{\bar{c}c'} d\left(\frac{2y}{b}\right)$
C_p	pressure coefficient, $\frac{\Delta p}{q}$
M	Mach number
Δp	local static pressure minus the free-stream static pressure
q	dynamic pressure
x	distance parallel to the center line
y	distance normal to the-plane of symmetry

a model angle of attack

δ angle of twist of the chord line measured in planes parallel to the plane of symmetry

Subscripts:

L wing lower surface

u wing upper surface

MODEL DESCRIPTION

The general arrangement of the model is shown in figure 1(a). The wing was mounted to the same steel body of revolution used in references 4 and 5. The fuselage had a fineness ratio of 11, an ogive nose, cylindrical center section and a boattail afterbody. The wing was swept 30° at the quarter-chord line with a taper ratio of 0.2, and aspect ratio of 3, and NACA 65A004 sections parallel to the plane of symmetry. Two wings were constructed of different materials. Figure 1(b) shows typical cross sections of both wings. One was constructed entirely of steel with a leading-edge section and a trailing-edge section which was tongue and grooved to a center section. The spaces left in the grooves were used as ducts for the pressure tubes to the orifices. The other wing was constructed in such manner that a steel core with a thin brass plate at the trailing edge was surrounded with the wing pressure tubes, and then polyester resin was poured about the structure to form the wing contour. This wing hereinafter is called the plastic wing.

The twist characteristics for these wings were determined by the method described in appendix A. The steel wing was found to be less than half as flexible as the plastic wing. The influence coefficients A_{ij} and B_{ij} (see appendix A) used to calculate the twist were as follows:

For the steel wing:

i	$A_{ij} \times 10^{-5}$ at $j = -$				
	1	2	3	4	5
1	0	0	0	-1	-4
2	-2	6	-2	-8	-13
3	-2	5	9	-9	-28
4	1	4	7	11	-27
5	1	4	5	12	-5

i	$B_{ij} \times 10^{-5}$ at $j = -$				
	1	2	3	4	5
1	0	0.1	0.11	0.2	-0.3
2	-.1	1.3	1.1	.9	.93
3	-.11	1.7	3.9	3.2	.3
4	.33	11.7	4.9	11.5	10.5
5	.3	1.8	4.88	14.1	37*9

For the plastic wing:

		$A_{ij} \times 10^{-5}$ at $j = -$				
		1	2	3	4	5
i	1	0	-2	-3	-6	-11
1	2	-1	7	-7	-22	-34
2	3	1	9	8	-31	-78
3	4	2	9	14	-2	-100
4	5	2	9	14	6	-69

		$B_{ij} \times 10^{-5}$ at $j = -$				
		1	2	3	4	5
i	1	0	0.3'	1.0	0.8	1.1
1	2	-0.1	1.9	1.8	0	3.1
2	3	.1	3.3	7.0	7.3	7.6
3	4	.2	3.5	10.4	23.1	33.4
4	5	.2	3.5	11.1	30.2	90.8

where A_{ij} and B_{ij} represent the twist in degrees measured parallel to the angle-of-attack plane at the i th station due to a load or moment . . . at the j th station, respectively. The five spanwise stations chosen were located as follows:

Station	$\frac{y}{b/2}$
1	0.245
2	.412
3	.580
4	.750
5	.915

A better comparison of the twist-characteristics, however, of' the steel and plastic wing is shown in figures 2(a) and (b). The plots show the effect of a unit loading applied at any spanwise station (abscissa), On the particular spanwise stations 1 through 5, for-loadings at the 25- and 65-percent-chord lines. The main difference between the two plots result-s from a change in the stiffness and a shift of the elastic-axis location of the two wings. If the elastic axis is defined as that point of the local chord which gives zero twist when a load is applied at the point, then figure 2 indicates the position of the elastic axis. The plots show that the elastic axis of the plastic wing passes through the 0.25c at about the $0.75b/2$ station, while that of "the steel wing passes through the 0.25c at the $0.85b/2$ station. Inboard of-these spanwise-stations the elastic axis lies behind the 0.25c line (positive-values of twist), and outboard the axis lies ahead of the 0.25c line (negative values of twist).

The rows of pressure orifices were located at 16, 25, 40, 60, 75, and 95 percent semispan stations for both the steel and plastic wings. In each row on both the upper and lower surfaces, the orifices were

located at 1, 2, 5, 7, 10 percent c and at intervals of every 5 percent chord thereafter up to the 95-percent-chord station.

TESTS AND TECHNIQUES

The tests were conducted in the Langley 16-foot transonic tunnel, which is described in reference 7. The Mach number range extended from 0.80 to 1.03, which corresponded to a Reynolds number range from about 7×10^6 to 8×10^6 (based on the wing mean aerodynamic chord). The maximum angle-of-attack range extended from -20 to 26° in 2° increments.

The pressure data were obtained simultaneously with the force data presented in reference 2. The wing pressures were recorded by photographing mercury manometer boards. The data were then processed by electronic calculating machines, which plotted and tabulated the results.

At the termination of the pressure program, a study was made of the flow in the boundary layer of the plastic wing for a reduced Mach number and angle-of-attack range. The technique used in reference 5 was employed to render the flow visible. The technique entails painting the wing surface black and then applying a white ground-glass paint similar to china clay. The wing therefore appears white when dry. Wetting with a clear fluid causes the black sublayer to become visible. Thus, by emitting fluid from a point source on the wing in a stream, the fluid path in the boundary layer is traced. As the fluid trace changes with time, the history of the trace disappears as a result of the evaporation of the fluid, so that the existing trace represents an average flow for a short interval of time. For these tests clear varsol was used as the liquid agent. The point sources were particular pressure orifices through which the fluid was forced. The locations of the sources were as follows:

$\frac{x}{c}$ at -				
$0.25 \frac{b}{2}$	$0.40 \frac{b}{2}$	$0.60 \frac{b}{2}$	$0.75 \frac{b}{2}$	$0.95 \frac{b}{2}$
0.5	0.5	0.5	0.5	0.5
.10	----	----	----	----
.15	.15	----	----	----
.20	.20	----	----	----
.25	.25	.25	.25	----
----	.35	----	----	----
.45	.45	.45	.45	.45
.65	.65	.65	.65	----
.80	.80	.80	.80	.80
.90	.90	.90	.90	----

The flow studies were recorded photographically.

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ACCURACY OF MEASUREMENTS

Sufficient time was allowed after a particular test condition was reached for the pressure manometer tubes to settle within about 1 percent of the ultimate value of the manometer level.

The indicated angle of attack was corrected for tunnel-flow angularity. Based on readout-accuracy and repeatability, the angle of attack and Mach number are believed to be accurate within the following limits:

α , deg	"	± 0.01
M	"	± 0.005

RESULTS AND DISCUSSION

Flow studies.- Sample photographs of the flow on the right plastic wing are presented in figure 3. No general discussion of swept-wing flow is attempted here. Only those features of the flow studies which represent significant characteristics to be noted in the following wing pressure discussion are covered. A general discussion of the flow over swept wings may be found in references 8, 9, and 10.

Some of the features of the boundary flow which can be noted in the photographs of figure 3 are the indications of shock waves, the indications of flow separation, and the indications of vortex-type flow.

Shock waves are frequently indicated by the fluid path where there are abrupt changes of the streamlines. Note in figure 3(a) at $M = 0.94$ that shadowgraph traces of the waves are visible at angles of attack of 2° and 4° (indicated by the arrows on the figure), and note how the fluid lines are altered where they intersect the wave. The location of the waves is more-obvious at the higher angles of attack by the more abrupt turning of the flow.

Separation first appears as an irregular darkened region generally increasing in area with increasing angle of attack. For this wing there appear to be two different areas where separation may commence, depending on the Mach number. At $M = 0.80$ for example, figure 3(a) at $\alpha = 4^\circ$ shows the separation to start along the leading edge near the wing tip. This results from a combination of a swept leading edge, a small leading-edge radius, and a thin wing. At the higher Mach numbers leading-edge separation as such occurs only at much higher angles of attack. (compare 0.80 with 0.94 and 1.03 Mach numbers of fig. 3(a) for $\alpha = 60^\circ$.) However, separation does start near the tip at the trailing edge before the leading-edge separation occurs. See figure 3(a) at $\alpha = 6^\circ$ for

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$M = 0.94$ and figure 3(b) at $\alpha = 10^\circ$ for $M = 1.03$. This separation appears to stem from the intersection, in the vicinity of the wing tip, of the shocks originating at the leading edge and near the trailing edge of the wing-body juncture. Both types of separation extend inboard with increasing angle of attack.

Once separation occurs, the existence of vorticity in the flow above the wing is indicated in the boundary-layer traces by the circulation of the fluid lines in a counterclockwise direction. For example, observe the photographs for $M = 0.80$ at the higher angles of attack. A line through the aftermost points along each of the indicated streamlines should coincide with the projection of the vortex core on the wing surface. Note that at $\alpha = 6^\circ$, the vortex cone sheds near the tip and the point of shedding progresses inboard with increasing angle of attack, as does the separation. At $\alpha = 19^\circ$ (fig. 3(c)) the vortex appears to shed at about $0.25b/2$. The vortex strength at this angle of attack is much greater than at the lower angles of attack, as is shown by the accumulation of the fluid near the vortex origin.

The origin of the vorticity at $M = 0.94$ and $M = 1.03$ appears to be in the vicinity of the intersection of the shock waves where the separation forms. Vorticity is permitted at the shock intersection since different entropy changes occur inboard and outboard of the intersection. The angle of attack at which this vortex forms increases with Mach number. With increasing angle of attack at the higher Mach numbers, the vortex flow finally reverts to a vortex generated along the leading edge once the leading-edge separation occurs at the higher angles of attack.

Chordwise pressure distributions. - A tabulation of the chordwise pressure coefficients for all test conditions for the steel wing is presented in table I. Figure 4 presents a comparison between the chordwise pressure distributions for the plastic and steel wings. As is noted, there are minor differences in the angles of attack for the two wings. In general these differences are of the order of the accuracy of measurements of these angles ($\pm 10^\circ$). The differences in the pressure coefficient with one exception may therefore be considered to be caused principally by aeroelastic effects. A significant difference in the variation of the chordwise pressure distributions exists between the two wings at angles of attack from about 2 to 8° at a Mach number of 0.80 . As this Mach number was the first for which data were obtained, the discrepancy suggests a temporary difference in the leading-edge surface conditions for the two wings. The plastic-wing flow studies of figure 3(a), which were taken after the Pressure tests, for angles of attack of 4° and 6° at a Mach number of 0.80 indicated separation at the outer spanwise stations, but the pressure distributions of the plastic wings indicated attached flow. The outboard stations of the plastic wing generally show the effect of decreased local angles of attack due to load when compared to the steel wing.

For either wing at the low angles of attack the increase in load coefficient progressing toward the tip illustrates the effective spanwise increase of angle of attack induced by the trailing vortices of a highly tapered swept wing. Consequent, the separation appears first at the tip and progresses inboard with increasing angle of attack as indicated by the flow studies of figure 3.

The pressure distributions on the upper surface are fairly constant over most of the wing panel at an angle of attack of about -20° , which of course indicates separation. Increasing the angle above 20° produces more negative pressure coefficients and, in addition, the innermost-station shows signs of the streamlines being tinned downward toward the wing surface; that is, the pressures near the trailing edge begin to recover or increase in a positive sense. As the angle of attack is further increased this effect tends to progress outboard. These pressure changes are believed to be caused by the change in location and the increasing strength of the vortex that is shown in figure 3 at $M = 0.80$. At $M = 0.94$ to 1.03 for the high angles of attack, the distributions near the root are also influenced by the strong shock wave shown by the chordwise distributions.

Spanwise load distributions. - It is apparent from the chordwise pressures that the type of wing construction, with some exceptions, has only minor effects on load distribution; therefore, the spanwise load distributions are presented only for the steel wing in figure 5. The distributions are nearly elliptical at the low angles of attack, but as the angle of attack increases, the load distributions tend to become triangular, with the triangular loading commencing at the tip. The triangular distribution spreads inboard as separation forces with further increase-of angle of attack. At the angles of attack where the load distribution is elliptical inboard and triangular outboard, increasing Mach number tended to reduce the extent of the triangular loading. The implication is that increasing Mach number at a high constant angle of attack extends the attached flow region outboard. This implication is verified by the flow studies (fig. 3(c)). Note that at angles of attack of 15° and 17° , the higher the Mach number, the larger the region of-attached flow .

Panel loads. - The variation of the integrated wing loads with angle of attack is shown in figure 6 for the teat- Mach number range. If compressibility effects are considered, the load-carrying capacity per unit angle of attack should increase to a maximum at approximately $M = 1.00$.

The data show that, for C_N values up to about 0.6, the maximum load-carrying capacity per unit angle of' attack occurred at $M \approx 0.94$. For C_N values from 0.6 to the highest test value, the maximum load-carrying capacity occurred at $M \approx 0.98$.

A comparison of the variation of the panel pitching-moment coefficient about the $0.25c'$ with normal-force coefficient and the wing-tidy pitching-moment data of reference 2 is shown in figure 7. The changes of the slopes $\frac{dc_m}{dc_N}$ with normal-force coefficient agree in general with those of the data of reference 2. The absolute differences in $\frac{dc_{wm}}{dc_N}$ at a given normal-force coefficient are due to the absence of the fuselage stability contribution in the present data.

Center of loads.-- Figure 8 presents the exposed panel load centers and the local section load centers for the angle-of-attack and Mach number range of the tests. The spanwise center of load was located at approximately 50 percent of the semispan for all test conditions. The most rearward position was at about 46 percent of the mean aerodynamic chord for the panel load centers and 46 percent of the local chord for the section load centers.

Increasing angle of attack up to about 20° tended to shift the panel center of load rearward and inboard. The single data point for α above 20° shows a tendency for the center of load to become invariant with the higher angles of attack. In general the effects of changes in angle of attack on the center of load decrease with increasing Mach number; this result is to be expected since the chordwise load distribution becomes more rectangular as the flow becomes supersonic over most of the wing.

Twist distribution.-- Combining the influence coefficients and the integrated normal forces and moments in the manner described in appendix A or by the method of reference 5 yields the wing spanwise twist distributions. The dynamic pressures corresponding to the measured loads are presented in figure 9 for the test Mach number range. Calculations were made for both wings at angles of attack of 4° , 8° , and 20° and for $M = 0.80$ and 1.00 . A comparison of the resulting spanwise twist distributions for the steel and plastic wings is presented in figures 10(a) and 10(b). At $\alpha = 20^\circ$ and $M = 1.0$ the calculated twist angle of the tip of the plastic wing was -0.9° as compared to -0.4° for the steel wing.

CONCLUDING REMARKS

The following remarks are drawn from the leads investigation of an all steel wing and a geometrically identical reinforced plastic wing. Both wings have 30° sweepback of the quarter chord, a taper ratio of 0.2, and embody NACA 65A004 airfoil sections.

The chordwise pressure distributions for the steel and plastic wings were similar for the test range with some exceptions at Mach number 0.80.

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However the type of construction had only minor effects on the chordwise and spanwise load distributions. The order of magnitude of the tip twist was calculated at a Mach number of 1.0 and an angle of attack of 20° to be -0.9° for the plastic wing as compared to -0.4° for the steel wing. The spanwise load distributions were nearly elliptical at the low angles of attack, but at the higher angles the distributions tended to become triangular commencing at the tip. The center of load on the wing panels moved rearward and inboard with increasing angle of attack for all Mach numbers. The movement of the load center with angle of attack decreased considerably with increasing Mach number.

Langley Aeronautical Laboratory,
National Advisory Committee for Aeronautics,
Langley Field, Vs., June 19, 1957.

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APPENDIX A

METHOD OF COMPUTING WING TWIST DUE TO AERODYNAMIC LOADING.

If the spanwise and chordwise distribution of aerodynamic loading of an elastic wing are known, the twist distribution of the wing can be calculated, as follows

$$\{\theta\} = [A] \{l\} + [B] \{m\}$$

where the influence coefficients are defined as the elements of the square matrices [A] and [B].

The elements A_{ij} and B_{ij} represent the twist at the i th spanwise station due to a load or moment at the j th station.

The spanwise load distribution and the spanwise pitching-moment distribution are elements of the column matrices $\{l\}$ and $\{m\}$, respectively, where the elements l_j and m_j are the integrated loads and moments respectively over the j th spanwise segment; that is,

$$l_j = q \bar{c} \frac{b}{2} \int_{(j-1)/n}^{j/n} c_n \frac{c}{\bar{c}} d\left(\frac{2y}{b}\right)$$

and

$$m_j = q c' \bar{c} \frac{b}{2} \int_{(j-1)/n}^{j/n} c_m \frac{c^2}{c' \bar{c}} d\left(\frac{2y}{b}\right)$$

where

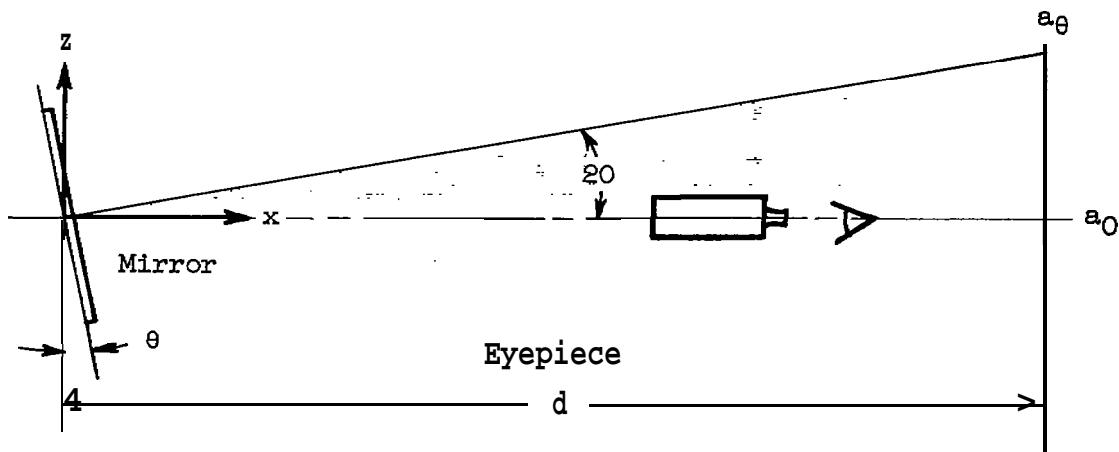
n number of spanwise stations

c' mean aerodynamic chord

\bar{c} average chord

c local chord

The setup for measuring twist with mirrors is shown in figure 11. The technique employed for obtaining the influence coefficients involved principally the use of mirrors, linear-scales, and a transit. Loads were applied at the desired points along the wing. A diagram illustrating the twist measurements is shown below:



where

a. zero twist reading

a_θ reading due to twist θ

A change in the angle θ of the mirror required a change in the scale reading as sighted through the eyepiece. Small translations of the mirror up or down have little effect on the scale reading. Thus, only twist about the y-axis (perpendicular to the plane of the paper) is observed.

Loading at the jth spanwise station of the $0.25c$ yields the influence coefficients due to normal force of the ith spanwise station. Thus

$$A_{ij} = \frac{\theta_i}{(\text{Load})_j} \frac{\text{deg}}{\text{lb}}$$

where

$$\theta_i = \frac{1}{2} \tan^{-1} \frac{(a_\theta - a_{0j})}{jd}$$

Loading at the j th spanwise station of the $0.65c$ yields the influence coefficients due to a moment about the y -axis through the $0.25c$ of the i th station; thus,

$$B_{ij} = \frac{\theta_{i0.65c}}{\text{Load } j} - A_{ij} \frac{\text{deg}}{\text{in-lb}}$$
$$(0.65c - 0.25c)_j$$

where

$$\theta_{i0.65c} = \frac{1}{2} \tan^{-1} \frac{a_{\theta j} - a_j}{d} 0.65c$$

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REFERENCES

1. Toll, Thomas A.: Longitudinal Characteristics of Wings. NACA RM L53I2lb, 1953.
2. Willis, Conrad M.: Investigation of Static Longitudinal Stability Characteristics at Transonic Speeds of 30° Sweptback Wing in Wing Body Configuration With and Without Horizontal Tail. NACA RM L57B26, 1957.
3. Solomon, William, and Schmeer, James W.: Effect of Longitudinal Wing Position on the Pressure Characteristics at Transonic Speeds of a 45° Sweptback Wing-Fuselage Model. NACA RM L52K05a, 1953.
4. Hieser, Gerald, Henderson, James H., and Swihart, John M.: Transonic Aerodynamic and Loads Characteristics of a 4-Percent-Thick Unswept-Wing-Fuselage Combination. NACA RM L54B24, 1954.
5. Runckel, J. F., and Lee, Edwin E., Jr.: Investigation at Transonic Speeds of the Loading Over a 45° Sweptback Wing Having an Aspect Ratio 3, a Taper Ratio of 0.2, and NACA 65A004 Airfoil Sections. NACA RM L56F12, 1956.
6. Swihart, John M., and Foss, Willard E., "Jr.: Transonic Loads Characteristics of a 3-Percent-Thick 60° Delta-Wing-Body Combination. NACARM L57D12, 1957.
7. Ward, Vernon G., Whited, Charles F., and Pearson, Merwin D.: Air-Flow and Power Characteristics of the Langley 16-Foot Transonic Tunnel With Slotted Test Section. NACA RM L52E01, 1952.
8. Kuchemann, D.: Types of Flow on Swept Wings With Special Reference to Free Boundaries and Vortex Sheets. Jour. R.A.S., vol. 57, no. 512, NOV. 1953, pp. 683-699.
9. Furlong, Chester G., and McHugh, James G.: A Summary and Analysis of the Low-Speed Longitudinal Characteristics of Swept Wings at High Reynolds Number. NACA RM L52D16, 1952.
10. Jaquet, Byron M.: Effects of Chord Discontinuities and Chordwise Fences on Low-Speed Static Longitudinal Stability of an Airplane Model Having a 35° Sweptback Wing. NACA RM L52C25, 1952.

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TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER

		Pressure coefficient, P, at														
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2			
Per cent	V	H = 0.80						M = 0.80								
		.01	.631	.563	.510	.458	.279	.050	.677	.640	.661	.624	.675			
1.25	.290	.222	.257	.287	.288	.288	.161	.001	.009	.026	.048	.068	.068			
2.50	.238	.132	.148	.178	.203	.193	.120	-.049	-.050	-.086	-.070	-.020				
5.00	.164	.099	.096	.109	.114	.145	.031	-.049	-.050	-.071	-.088	-.083				
10.00	.149	.065	.083	.065	.067	.083	.034	-.049	-.056	-.089	-.108	-.107				
15.00	.092	.040	.046	.036	.037	.033	.012	-.055	-.079	-.130	-.103	-.124				
20.00	.022	.017	.029	.014	.020	.072	-.035	-.079	-.090	-.112	-.126	-.145				
25.00	-.006	-.020	-.041	-.053	-.053	.103	.071	-.057	-.058	-.135	-.151	-.156				
30.00	-.024	-.042	-.051	-.061	-.068	.103	.075	-.104	-.124	-.137	-.152	-.136				
35.00	-.054	-.061	-.069	-.069	-.085	.114	.104	-.120	-.126	-.139	-.158	-.141				
40.00	-.068	-.085	-.080	-.090	-.093	.152	.113	-.120	-.139	-.149	-.158	-.175				
45.00	-.068	-.073	-.093	-.100	-.114	.190	.110	-.120	-.145	-.149	-.126	-.143				
50.00	-.054	-.084	-.098	-.108	-.119	.134	.092	-.120	-.144	-.149	-.121	-.141				
55.00	-.063	-.091	-.103	-.108	-.125	.126	.088	-.124	-.143	-.146	-.150	-.127				
60.00	-.087	-.092	-.097	-.103	-.114	.100	.112	-.124	-.131	-.136	-.138	-.094				
65.00	-.079	-.085	-.086	-.089	-.094	.112	.095	-.103	-.114	-.118	-.110	-.106				
70.00	-.072	-.074	-.072	-.075	-.082	.097	.087	-.092	-.092	-.089	-.092	-.052				
75.00	-.086	-.074	-.058	-.055	-.055	.055	-.075	-.076	-.072	-.064	-.067	-.043				
80.00	-.054	-.050	-.044	-.044	-.044	.044	-.054	-.054	-.054	-.054	-.054	-.042				
85.00	-.051	-.028	-.017	-.011	-.007	.015	-.056	-.053	-.024	-.011	-.005	-.005				
90.00	-.021	-.016	-.007	-.017	-.021	.003	-.015	-.013	-.001	-.030	-.019	-.019				
95.00	-.014	-.006	.082	.043	.021	.008	.023	.009	.033	.049	.037	.019				
		1.15	-.032	-.438	-.689	-.942	-.760	.125	.000	-.038	-.072	-.001	-.108			
		2.50	-.077	-.262	-.331	-.456	-.547	.076	.044	-.063	-.079	-.085	-.103			
		5.00	-.094	-.108	-.238	-.317	-.403	.545	.044	-.027	-.061	-.073	-.081			
		10.00	-.107	-.184	-.229	-.287	-.346	.441	.019	-.049	-.074	-.091	-.093			
		15.00	-.157	-.177	-.218	-.248	-.319	.476	.032	-.020	-.032	-.034	-.120			
		20.00	-.150	-.177	-.201	-.250	-.307	.294	.022	-.014	-.113	-.124	-.145			
		25.00	-.164	-.181	-.187	-.232	-.252	.216	.063	-.062	-.112	-.141	-.156			
		30.00	-.134	-.171	-.130	-.220	-.243	.226	.057	-.095	-.121	-.137	-.145			
		35.00	-.148	-.181	-.194	-.229	-.243	.181	.077	-.108	-.132	-.149	-.158			
		40.00	-.169	-.176	-.196	-.221	-.225	.191	.097	-.113	-.141	-.155	-.147			
		45.00	-.149	-.183	-.195	-.221	-.221	.187	.084	-.122	-.146	.162	-.156			
		50.00	-.178	-.186	-.193	-.213	-.207	.177	.121	-.132	-.141	.162	-.141			
		55.00	-.172	-.178	-.191	-.204	-.194	.152	.117	-.127	-.132	.145	-.154			
		60.00	-.162	-.166	-.175	-.187	-.190	.132	.172	-.172	-.172	.159	-.119			
		65.00	-.154	-.164	-.179	-.188	-.193	.116	.162	-.160	-.160	.125	-.093			
		70.00	-.134	-.146	-.158	-.168	-.178	.106	.162	-.160	-.160	.104	-.071			
		75.00	-.137	-.116	-.116	-.100	-.094	.084	.104	-.084	-.084	.079	-.054			
		80.00	-.101	-.090	-.101	-.066	-.069	.063	.073	-.067	-.061	-.051	-.044			
		85.00	-.078	-.061	-.073	-.031	-.041	.021	.055	-.043	-.027	-.021	-.023			
		90.00	-.044	-.034	-.038	-.003	-.001	.021	.075	-.019	-.006	-.009	.011			
		95.00	-.009	-.006	-.014	-.024	-.030	.017	.012	-.004	-.034	-.027	-.037			
			H = 0.80					M = 0.80								
			1.25	-.025	-.561	.647	.449	.419	.606	.030	.341	.191	.124	.067		
			2.50	-.027	-.330	-.454	-.667	-.707	-.557	-.236	-.101	-.003	1.014	-.108		
			5.00	-.061	-.304	.357	.559	.576	.560	-.250	-.015	-.015	-.968	-.081		
			10.00	-.168	-.249	.285	.252	.423	.543	.367	-.578	-.715	.902	.718		
			15.00	-.158	-.247	.247	.300	.329	.385	-.294	-.379	-.588	-.644	-.081		
			20.00	-.148	-.201	.240	.265	.301	.314	-.255	-.344	.504	.768	-.026		
			25.00	-.143	-.211	.245	.254	.285	.268	-.224	-.319	.401	.203	-.656		
			30.00	-.185	-.196	.228	.258	.223	.246	-.274	-.307	.367	.426	-.619		
			35.00	-.098	.213	.233	.243	.273	.223	-.274	-.305	.315	.948	-.525		
			40.00	-.204	.208	.228	.248	.248	.212	-.274	-.305	.305	.355	-.472		
			45.00	-.201	.206	.226	.248	.248	.234	-.274	-.305	.304	.313	-.411		
			50.00	-.171	.199	.212	.226	.226	.195	-.221	-.242	.245	.277	-.379		
			55.00	-.157	.195	.210	.215	.170	.190	-.221	-.245	.249	.237			
			60.00	-.112	.188	.194	.187	.187	.147	.214	-.215	.218	.221	-.208		
			65.00	-.158	.160	.168	.155	.154	.149	.186	-.181	.196	.181	-.211		
			70.00	-.145	.142	.141	.153	.131	.106	.164	-.159	.158	.151	-.144		
			75.00	-.124	.122	.117	.102	.101	.091	.144	-.137	.121	.121	-.159		
			80.00	-.107	.093	.086	.078	.070	.066	.116	-.105	.096	.023	-.077		
			85.00	-.095	.068	.054	.042	.035	.040	.100	-.072	.070	-.058	-.043		
			90.00	-.054	.043	.025	.015	.001	.02	.034	-.031	.022	-.050	-.024		
			95.00	-.013	.018	.010	.023	.013	.018	.010	-.013	.003	-.014	-.002		
				1.25	.257	.224	.230	.268	.321	.246	.403	.615	.410	.457	.511	.404
				2.50	.190	.120	.152	.181	.210	.180	.339	.201	.328	.356	.392	.331
				5.00	.147	.096	.094	.114	.132	.118	.282	.231	.234	.449	.202	.260
				10.00	.108	.052	.046	.065	.090	.063	.230	.174	.181	.191	.225	
				15.00	.070	.025	.017	.033	.048	.023	.183	.141	.144	.145	.174	.133
				20.00	.035	.002	.004	.004	.002	.043	.142	.111	.104	.098	.114	.045
				25.00	.001	-.008	-.029	-.041	-.029	-.087	.096	.089	.068	.069	.074	-.016
				30.00	-.017	-.017	-.042	-.061	-.055	-.102	.072	.058	.017	.016	.038	-.001
				35.00	-.018	-.042	-.082	-.071	-.067	-.117	.054	.024	.012	.001	.033	-.009
				40.00	-.045	-.068	-.093	-.098	-.097	-.101	.054	.033	.010	.027	-.016	.103
				45.00	-.066	-.078	-.091	-.126	-.101	-.138	.002	.014	-.027	-.042	-.050	-.112
				50.00	-.104	-.102	-.102	-.119	-.119	-.122	.004	.033	-.040	-.022	-.050	-.122
				55.00	-.106	-.112	-.112	-.115	-.120	-.122	.045	-.060	-.060	-.050	-.064	-.125
				60.00	-.103	-.111	-.115	-.115	-.126	-.110	.054	-.063	-.071	-.079	-.084	-.104
				65.00	-.097	-.102	-.102	-.112	-.119	-.117	.054	-.061	-.066	-.083	-.086	-.109
				70.00	-.090	-.093	-.087	-.093	-.091	-.092	.048	-.054	-.060	-.059	-.063	-.089
				75.00	-.113	-.095	-.085	-.082	-.050	-.080	.080	-.059	-.055	-.064	-.059	-.081
				80.00	-.088	-.073	-.067	-.057	-.059	-.061	.056	-.045	-.045	-.044	-.044	-.070
				85.00	-.074	-.056	-.040	-.032	-.042	-.027	.048	-.040	-.039	-.039	-.028	-.033
				90.00	-.047	-.075	-.023	-.010	-.009	-.009	.028	-.016	-.016	-.016	-.016	-.016
				95.00	-.009	.015	.008	.010	.014	.002	.001	-.004	.011	-.008	.017	-.026

CONFIDENTIAL

TABLE 1.- STEEL WING PRESSURE COEFFICIENT DATA FOR THE TE2T
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:														
	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.93b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	
Upp. surf.	M = 0.00	a = 5.92°					M = 0.80	a = 7.95°						
Lowe. wific														
0.00	.039	.107	-.054	-.160	-.197	.496	.029	-.132	-.343	.469	-.467	.247		
1.25	-.143	-1.73	-1.120	-1.014	-.811	-.518	-.671	-1.419	-1.327	-.928	-1.700	-.475		
2.50	-.504	-1.276	-1.108	-1.014	-.805	-.546	-.734	-1.474	-1.318	-.923	-1.697	-.484		
5.00	-.643	-1.057	-1.088	-1.007	-.797	-.546	-.884	-1.427	-1.342	-.913	-1.689	-.479		
7.50	-.510	-1.811	-1.047	-1.003	-.785	-.546	-.000	1.281	1.383	-.903	-1.682	0		
10.00	-.481	-1.502	-1.007	-1.003	-.771	-.549	-.722	-1.082	-1.112	-.890	-1.677	-.482		
15.00	-.374	-1.393	-.853	-.902	-.760	-.574	-.513	-.524	-.566	-.666	-.666	-.465		
20.00	-.295	-1.260	-.850	-.892	-.742	-.570	-.485	-.485	-.507	-.607	-.607	-.465		
25.00	-.242	-1.260	-.852	-.714	-.742	-.572	-.485	-.420	-.584	-.827	-.642	-.485		
50.00	-.039	-1.352	-.705	-.705	-.658	-.530	-.423	-.407	-.584	-.795	-.624	-.485		
75.00	-.551	-1.345	-.516	-.606	-.660	-.513	-.412	-.386	-.587	-.766	-.604	-.481		
100.00	-.322	-1.315	-.299	-.426	-.620	-.499	-.372	-.352	-.584	-.753	-.583	-.475		
150.00	-.310	-1.276	-.285	-.400	-.592	-.476	-.217	-.280	-.574	-.703	-.568	-.471		
200.00	-.268	-1.280	-.268	-.332	-.542	-.458	-.217	-.280	-.564	-.644	-.545	-.463		
250.00	-.225	-1.262	-.256	-.279	-.502	-.440	-.267	-.305	-.574	-.617	-.529	-.454		
500.00	-.241	-1.240	-.233	-.247	-.452	-.415	-.293	-.285	-.574	-.580	-.511	-.422		
750.00	-.205	-1.207	-.193	-.204	-.413	-.386	-.242	-.263	-.574	-.518	-.489	-.412		
1000.00	-.182	-1.179	-.198	-.185	-.369	-.384	-.199	-.206	-.574	-.459	-.459	-.349		
1500.00	-.177	-1.190	-.196	-.080	-.324	-.228	-.160	-.157	-.158	-.374	-.432	-.418		
2000.00	-.102	-1.084	-.077	-.067	-.237	-.307	-.159	-.121	-.158	-.353	-.408	-.380		
2500.00	-.059	-1.051	-.057	-.034	-.185	-.245	-.080	-.086	-.082	-.283	-.380	-.417		
5000.00	.011	-1.018	-.006	-.005	-.156	-.281	-.037	-.045	-.031	-.225	-.369	-.413		
1.25	.531	.547	.536	.570	.592	.664	.637	.638	.615	.621	.629	.500		
2.50	.472	.450	.468	.475	.494	.584	.593	.524	.534	.540	.550	.337		
5.00	.406	.343	.380	.364	.384	.326	.515	.456	.430	.457	.449	.374		
7.50	.348	.282	.308	.302	.321	.254	.444	.367	.311	.375	.387	.297		
10.00	.305	.245	.288	.256	.265	.170	.393	.267	.250	.327	.327	.251		
15.00	.208	.198	.214	.205	.205	.100	.240	.197	.191	.207	.207	.156		
20.00	.102	.124	.124	.105	.109	.040	.212	.189	.173	.171	.157	.076		
25.00	.149	.129	.124	.105	.109	.000	.212	.189	.173	.171	.157	.076		
50.00	.092	.085	.083	.079	.049	.040	.184	.149	.135	.131	.123	.035		
75.00	.070	.064	.059	.048	.040	.052	.112	.111	.107	.090	.084	.027		
100.00	.064	.062	.044	.027	.022	.086	.112	.091	.077	.063	.056	.074		
150.00	.057	.021	.016	.001	-.002	.111	.103	.065	.052	.035	.024	.114		
200.00	.005	-.002	-.005	-.026	-.024	-.126	.083	.039	.030	-.009	-.003	.130		
250.00	-.010	-.016	-.015	-.023	-.050	-.124	.039	.020	.012	-.003	-.037	.133		
500.00	-.020	-.028	-.024	-.039	-.072	-.124	.005	.005	.001	-.020	-.056	.141		
750.00	-.015	-.029	-.024	-.040	-.104	-.133	.005	.006	.012	-.038	-.075	.154		
1000.00	-.049	-.031	-.020	-.046	-.058	-.124	.029	.021	.021	-.077	-.129	.159		
1500.00	-.016	-.027	-.018	-.031	-.031	-.121	.024	.021	.021	-.053	-.084	.171		
2000.00	-.015	-.006	.007	-.005	-.054	-.124	.028	.013	.014	-.053	-.121	.149		
2500.00	.010	.005	.028	-.009	-.062	-.145	.000	.009	.008	-.085	-.167	.203		
1.25	M = 0.80											M = 0.30		
2.50	M = 0.80											M = 0.30		
5.00	.016	-.151	-.055	-.666	-.599	.087	.047	-.575	.835	.922	.763	-.094		
7.50	.026	-.174	-.152	-.777	-.625	-.452	-.057	-.560	1.024	.924	.726	.300		
10.00	.005	-.174	-.141	-.777	-.625	-.452	-.100	1.011	1.019	.718	.858	-.440		
15.00	-.043	-.158	-.124	-.771	-.617	-.453	-.100	1.012	1.013	.716	.846	-.438		
20.00	-.020	-.148	-.128	-.765	-.612	-.453	-.100	1.000	1.006	.718	.857	-.438		
25.00	-.011	-.134	-.120	-.756	-.612	-.450	-.073	1.226	.945	.715	.579	-.440		
50.00	-.066	-.992	-.160	-.742	-.608	-.455	-.352	-.939	1.930	.697	.571	-.440		
75.00	-.058	-.914	-.1090	-.727	-.604	-.455	-.353	-.939	1.930	.697	.571	-.440		
100.00	-.048	-.883	-.1023	-.705	-.599	-.457	-.539	-.662	1.926	.689	.566	-.444		
150.00	-.032	-.820	-.689	-.593	-.460	-.460	-.565	-.516	1.906	.671	.543	-.444		
200.00	-.020	-.784	-.687	-.584	-.462	-.462	-.489	-.475	1.922	.664	.540	-.444		
250.00	-.016	-.764	-.687	-.572	-.462	-.462	-.470	-.460	1.916	.626	.538	-.450		
500.00	-.005	-.644	-.545	-.503	-.463	-.463	-.470	-.468	1.916	.651	.509	-.543		
750.00	-.011	-.566	-.539	-.498	-.463	-.463	-.372	-.380	1.907	.647	.533	-.537		
1000.00	-.026	-.526	-.533	-.570	-.522	-.463	-.341	-.344	1.914	.574	.529	-.461		
1500.00	-.026	-.476	-.518	-.495	-.426	-.426	-.324	-.324	1.915	.515	.521	-.464		
2000.00	-.027	-.425	-.521	-.493	-.484	-.460	-.200	-.204	1.917	.534	.517	-.468		
2500.00	-.019	-.379	-.472	-.470	-.473	-.477	-.177	1.914	.538	.507	.497	-.478		
5000.00	-.026	-.331	-.167	-.437	-.449	-.477	-.10^*	1.911	.483	.491	-.483	-.484	-.472	
7500.00	-.008	-.217	-.419	-.441	-.477	-.477	-.10^*	1.911	.473	.484	-.479	-.481	-.471	
1.25	.713	.709	.617	.657	.645	.531	.809	.761	.708	.689	.660	.526		
2.50	.703	.692	.602	.600	.588	.577	.801	.687	.658	.644	.625	.509		
5.00	.623	.549	.512	.505	.501	.418	.720	.598	.579	.554	.533	.484		
7.50	.545	.445	.445	.445	.445	.347	.631	.527	.517	.499	.474	.399		
10.00	.476	.415	.397	.393	.385	.291	.558	.484	.471	.452	.441	.353		
15.00	.391	.340	.332	.331	.317	.203	.471	.411	.400	.399	.375	.278		
20.00	.325	.303	.272	.259	.260	.130	.398	.375	.363	.353	.333	.213		
25.00	.285	.252	.232	.215	.209	.075	.351	.338	.328	.322	.276	.123		
50.00	.250	.210	.187	.187	.189	.022	.311	.260	.240	.242	.224	.073		
75.00	.212	.172	.162	.159	.160	.002	.226	.198	.187	.183	.171	.047		
10.00	.111	.145	.120	.139	.100	.000	.209	.164	.132	.131	.117	.035		
15.00	.056	.113	.103	.047	.064	.000	.112	.081	.060	.060	.039	.004		
20.00	.037	.084	.049	.026	.036	-.135	.112	.104	.091	.068	.034	.004		
25.00	.066	.049	.028	.000	.035	-.156	.080	.057	.053	.015	.028	.004		
50.00	.041	.029	.013	.021	.062	-.156	.080	.057	.053	.015	.028	.004		
75.00	.029	.015	.001	-.033	.065	-.159	.059	.048	.025	.005	.036	.004		
10.00	.004	-.003	-.015	-.047	-.089	-.173	.032	.018	.005	-.029	-.069	.141		
15.00	-.013	-.010	-.024	-.086	-.104	-.186	.010	.004	-.003	-.046	-.083	.177		
20.00	-.020	-.014	-.024	-.086	-.132	-.172	-.008	-.006	-.023	-.072	-.116	.191		
25.00	-.015	-.018	-.015	-.104	-.159	-.228	-.018	-.021	-.054	-.109	-.155	.247		

TABLE I - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

		Pressure coefficient, P_c , at:											
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.60b/2		
arcmin		$M = 0.80 \quad \alpha = 13.99^\circ$											
		.022	-.849	-1.079	-1.061	-.665	-.322	.002	-1.047	-1.017	-.753	-.646	-.573
1.25		-1.106	-1.330	-1.009	-.724	-.622	-.493	-.849	-.879	-.795	-.723	-.623	-.541
2.50		-.1265	-1.980	-1.035	-.703	-.621	-.491	-.826	-.858	-.788	-.701	-.627	-.541
5.00		-.793	-1.328	-.973	-.699	-.617	-.491	-.840	-.883	-.795	-.692	-.624	-.540
7.50		-1.250	-1.279	-.947	-.698	-.611	-.491	-.856	-.908	-.799	-.690	-.617	-.541
10.00		-.1078	-1.249	-.957	-.698	-.610	-.491	-.867	-.896	-.809	-.887	-.682	-.544
12.50		-.920	-1.690	-.604	-.492	-.492	-.492	-.883	-.878	-.801	-.866	-.810	-.548
15.00		-.447	-1.009	-.894	-.600	-.598	-.492	-.892	-.854	-.785	-.680	-.602	-.547
17.50		-.677	-.843	-.855	-.680	-.595	-.494	-.735	-.829	-.761	-.674	-.608	-.552
20.00		-.576	-.854	-.854	-.673	-.593	-.495	-.735	-.808	-.736	-.674	-.606	-.554
25.00		-.533	-.678	-.810	-.666	-.593	-.498	-.735	-.773	-.759	-.674	-.606	-.554
30.00		-.511	-.789	-.661	-.593	-.500	-.498	-.588	-.748	-.742	-.670	-.607	-.555
35.00		-.504	-.560	-.749	-.650	-.530	-.497	-.581	-.715	-.733	-.707	-.688	-.559
40.00		-.441	-.525	-.725	-.645	-.520	-.497	-.512	-.688	-.729	-.666	-.628	-.562
45.00		-.465	-.507	-.691	-.630	-.588	-.500	-.560	-.673	-.719	-.658	-.612	-.568
50.00		-.444	-.470	-.662	-.615	-.585	-.513	-.524	-.651	-.698	-.657	-.612	-.572
55.00		-.438	-.460	-.636	-.581	-.568	-.518	-.530	-.639	-.698	-.656	-.611	-.579
60.00		-.409	-.447	-.594	-.601	-.579	-.522	-.523	-.608	-.698	-.648	-.605	-.575
65.00		-.380	-.427	-.588	-.569	-.574	-.527	-.508	-.598	-.698	-.648	-.605	-.580
70.00		-.362	-.287	-.555	-.502	-.566	-.533	-.502	-.569	-.699	-.626	-.610	-.586
75.00		-.356	-.527	-.568	-.597	-.537	-.537	-.481	-.545	-.639	-.625	-.602	-.588
80.00		-.217	-.293	-.490	-.561	-.557	-.541	-.444	-.905	-.621	-.623	-.206	-.530
Upper surface		$M = 0.80 \quad \alpha = 17.24^\circ$											
		.022	-.849	-1.079	-1.061	-.665	-.322	.002	-1.047	-1.017	-.753	-.646	-.573
1.25		-1.106	-1.330	-1.009	-.724	-.622	-.493	-.849	-.879	-.795	-.723	-.623	-.541
2.50		-.1265	-1.980	-1.035	-.703	-.621	-.491	-.826	-.858	-.788	-.701	-.627	-.541
5.00		-.793	-1.328	-.973	-.699	-.617	-.491	-.840	-.883	-.795	-.692	-.624	-.540
7.50		-1.250	-1.279	-.947	-.698	-.611	-.491	-.856	-.908	-.799	-.690	-.617	-.541
10.00		-.1078	-1.249	-.957	-.698	-.610	-.491	-.867	-.896	-.809	-.887	-.682	-.544
12.50		-.920	-1.690	-.604	-.492	-.492	-.492	-.883	-.878	-.801	-.866	-.810	-.548
15.00		-.447	-1.009	-.894	-.600	-.598	-.492	-.892	-.854	-.785	-.680	-.602	-.547
17.50		-.677	-.843	-.855	-.680	-.595	-.494	-.735	-.829	-.761	-.674	-.608	-.552
20.00		-.576	-.854	-.854	-.673	-.593	-.495	-.735	-.808	-.736	-.674	-.606	-.554
25.00		-.533	-.678	-.810	-.666	-.593	-.498	-.735	-.773	-.759	-.674	-.606	-.554
30.00		-.511	-.789	-.661	-.593	-.500	-.498	-.588	-.748	-.742	-.670	-.607	-.555
35.00		-.504	-.560	-.749	-.650	-.520	-.497	-.569	-.715	-.733	-.666	-.629	-.559
40.00		-.441	-.525	-.725	-.645	-.520	-.497	-.512	-.688	-.729	-.666	-.628	-.562
45.00		-.380	-.293	-.490	-.561	-.520	-.497	-.481	-.638	-.698	-.648	-.612	-.562
50.00		-.356	-.126	-.200	-.565	-.520	-.497	-.447	-.638	-.698	-.648	-.612	-.562
55.00		-.331	-.067	-.100	-.562	-.520	-.497	-.421	-.638	-.698	-.648	-.612	-.562
60.00		-.311	-.144	-.226	-.568	-.520	-.497	-.393	-.638	-.698	-.648	-.612	-.562
Lower surface		$M = 0.80 \quad \alpha = 21.30^\circ$											
		.022	-.849	-1.079	-1.061	-.665	-.322	.002	-1.047	-1.017	-.753	-.646	-.573
1.25		-.711	-.719	-.697	-.627	-.601	-.491	-.059	-.779	-.171	-.744	-.697	-.535
2.50		-.695	-.687	-.700	-.691	-.618	-.574	-.755	-.762	-.763	-.735	-.692	-.541
5.00		-.697	-.688	-.694	-.693	-.621	-.577	-.751	-.775	-.762	-.729	-.690	-.543
7.50		-.657	-.699	-.701	-.670	-.621	-.574	-.753	-.775	-.780	-.758	-.727	-.635
10.00		-.667	-.702	-.694	-.666	-.618	-.577	-.758	-.780	-.762	-.727	-.688	-.636
12.50		-.667	-.707	-.702	-.665	-.620	-.577	-.758	-.780	-.762	-.727	-.688	-.636
15.00		-.653	-.713	-.705	-.665	-.618	-.580	-.758	-.780	-.762	-.727	-.687	-.637
17.50		-.695	-.713	-.704	-.662	-.613	-.581	-.772	-.787	-.766	-.726	-.684	-.638
20.00		-.669	-.711	-.709	-.667	-.614	-.583	-.772	-.787	-.767	-.723	-.683	-.639
25.00		-.689	-.714	-.707	-.660	-.618	-.589	-.742	-.780	-.762	-.723	-.684	-.642
30.00		-.648	-.714	-.704	-.660	-.618	-.591	-.735	-.778	-.766	-.722	-.684	-.643
35.00		-.648	-.706	-.704	-.661	-.622	-.596	-.701	-.766	-.766	-.722	-.684	-.643
40.00		-.648	-.704	-.704	-.661	-.623	-.590	-.687	-.733	-.760	-.723	-.682	-.642
45.00		-.653	-.700	-.700	-.661	-.623	-.590	-.687	-.733	-.760	-.723	-.682	-.642
50.00		-.623	-.693	-.698	-.659	-.628	-.592	-.656	-.733	-.760	-.723	-.682	-.642
55.00		-.623	-.693	-.698	-.659	-.628	-.592	-.656	-.733	-.760	-.723	-.682	-.642
60.00		-.623	-.686	-.699	-.657	-.620	-.597	-.656	-.733	-.760	-.723	-.682	-.642
65.00		-.623	-.686	-.699	-.657	-.620	-.597	-.656	-.733	-.760	-.723	-.682	-.642
70.00		-.623	-.686	-.699	-.657	-.620	-.597	-.656	-.733	-.760	-.723	-.682	-.642
75.00		-.597	-.678	-.698	-.652	-.624	-.597	-.656	-.733	-.760	-.723	-.682	-.642
80.00		-.597	-.670	-.680	-.652	-.624	-.597	-.656	-.733	-.760	-.723	-.682	-.642
85.00		-.597	-.664	-.674	-.652	-.624	-.597	-.656	-.733	-.760	-.723	-.682	-.642
90.00		-.588	-.658	-.666	-.647	-.624	-.597	-.656	-.733	-.760	-.723	-.682	-.642
95.00		-.531	-.610	-.658	-.641	-.629	-.597	-.656	-.733	-.760	-.723	-.682	-.642
Upper surface		$M = 0.80 \quad \alpha = 19.29^\circ$											
		.022	-.849	-1.079	-1.061	-.665	-.322	.002	-1.047	-1.017	-.753	-.646	-.573
1.25		-.711	-.719	-.697	-.627	-.601	-.491	-.059	-.779	-.171	-.744	-.697	-.535
2.50		-.695	-.687	-.700	-.691	-.621	-.574	-.755	-.775	-.762	-.729	-.690	-.541
5.00		-.697	-.688	-.701	-.670	-.621	-.574	-.751	-.775	-.762	-.729	-.690	-.541
7.50		-.657	-.699	-.701	-.665	-.621	-.574	-.753	-.775	-.762	-.729	-.690	-.541
10.00		-.667	-.707	-.702	-.665	-.620	-.577	-.758	-.780	-.762	-.727	-.688	-.636
12.50		-.667	-.707	-.702	-.665	-.620	-.577	-.758	-.780	-.762	-.727	-.688	-.636
15.00		-.667	-.713	-.705	-.665	-.618	-.580	-.758	-.780	-.762	-.727	-.688	-.636
17.50		-.667	-.713	-.705	-.665	-.618	-.580	-.758	-.780	-.762	-.727	-.688	-.636

TABLE I.- STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF MOLE OF ATTACK AND MACE NUMBER - Continued

		Pressure coefficient, P, at:											
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
'arcdeg													
c		M = 0.80	a = 23.46°					M = 0.80	a = 25.45°				
Upper surface	0.00	-1.134	-0.958	-0.946	-0.896	-0.875	-0.825	-1.191	-1.032	-1.028	-1.029	-0.964	-0.865
	1.15	-0.957	-0.951	-0.942	-0.923	-0.865	-0.778	-1.049	-1.032	-1.029	-1.029	-0.950	-0.812
Lower surface	2.50	-0.949	-0.951	-0.936	-0.913	-0.865	-0.776	-1.032	-1.032	-1.023	-1.001	-0.950	-0.811
	5.00	-0.932	-0.932	-0.941	-0.907	-0.863	-0.773	-1.021	-1.035	-1.029	-0.995	-0.947	-0.809
Upper surface	7.50	-0.942	-0.935	-0.935	-0.907	-0.858	-0.774	-1.024	-1.035	-1.022	-0.995	-0.940	-0.800
	10.00	-0.945	-0.935	-0.941	-0.905	-0.858	-0.775	-1.030	-1.039	-1.030	-0.991	-0.939	-0.807
Lower surface	12.50	-0.944	-0.934	-0.934	-0.904	-0.856	-0.773	-1.030	-1.041	-1.032	-0.991	-0.938	-0.807
	15.00	-0.940	-0.938	-0.941	-0.902	-0.852	-0.772	-1.032	-1.039	-1.031	-0.987	-0.934	-0.804
Upper surface	17.50	-0.928	-0.959	-0.944	-0.902	-0.852	-0.772	-1.032	-1.039	-1.030	-0.984	-0.930	-0.801
	20.00	-0.909	-0.933	-0.944	-0.908	-0.849	-0.773	-1.032	-1.033	-1.010	-0.983	-0.927	-0.801
Lower surface	25.00	-0.841	-0.942	-0.942	-0.899	-0.848	-0.777	-1.065	-1.021	-1.050	-0.901	-0.925	-0.805
	30.00	-0.801	-0.931	-0.943	-0.899	-0.847	-0.777	-1.030	-1.021	-1.028	-0.981	-0.920	-0.806
Upper surface	35.00	-0.775	-0.919	-0.941	-0.895	-0.847	-0.779	-1.030	-1.020	-1.025	-0.977	-0.919	-0.807
	40.00	-0.801	-0.931	-0.943	-0.899	-0.846	-0.780	-1.032	-1.038	-1.019	-0.981	-0.920	-0.807
Lower surface	45.00	-0.753	-0.887	-0.940	-0.895	-0.846	-0.780	-1.032	-1.038	-1.019	-0.975	-0.916	-0.807
	50.00	-0.724	-0.860	-0.934	-0.892	-0.845	-0.781	-1.067	-1.014	-1.007	-0.971	-0.912	-0.806
Upper surface	55.00	-0.717	-0.831	-0.927	-0.881	-0.845	-0.780	-1.037	-1.038	-1.031	-0.922	-0.909	-0.803
	60.00	-0.680	-0.787	-0.881	-0.843	-0.843	-0.781	-1.073	-1.037	-1.039	-0.956	-0.901	-0.801
Lower surface	65.00	-0.740	-0.703	-0.881	-0.830	-0.845	-0.778	-1.037	-1.038	-1.030	-0.935	-0.924	-0.800
	70.00	-0.596	-0.688	-0.826	-0.819	-0.837	-0.778	-1.037	-1.038	-1.030	-0.935	-0.924	-0.800
Upper surface	75.00	-0.596	-0.632	-0.862	-0.836	-0.836	-0.774	-1.037	-1.038	-1.030	-0.935	-0.924	-0.800
	80.00	-0.555	-0.632	-0.830	-0.820	-0.827	-0.774	-1.047	-1.040	-1.034	-0.935	-0.924	-0.800
Lower surface	85.00	-0.448	-0.506	-0.721	-0.858	-0.820	-0.771	-1.012	-1.012	-1.012	-0.896	-0.855	-0.789
	90.00	-0.340	-0.408	-0.712	-0.854	-0.854	-0.768	-1.043	-1.031	-1.018	-0.871	-0.811	-0.781
Upper surface	95.00	-0.340	-0.408	-0.712	-0.854	-0.854	-0.768	-1.043	-1.031	-1.018	-0.871	-0.811	-0.779
	100.00	-0.852	.037	.715	.609	.511	.471	.813	.839	.702	.581	.476	.452
Lower surface	105.00	.037	.873	.772	.685	.635	.497	.987	.994	.779	.676	.626	.489
	110.00	.974	.848	.768	.704	.686	.519	.923	.979	.855	.726	.679	.568
Upper surface	115.00	.974	.848	.768	.704	.686	.519	.923	.979	.855	.726	.679	.568
	120.00	.974	.761	.705	.657	.570	.572	.937	.967	.872	.761	.677	.522
Lower surface	125.00	.737	.690	.644	.602	.570	.509	.977	.977	.893	.765	.697	.598
	130.00	.669	.637	.588	.545	.521	.442	.716	.682	.681	.592	.567	.441
Upper surface	135.00	.612	.577	.541	.501	.477	.482	.642	.630	.592	.542	.524	.323
	140.00	.549	.527	.491	.411	.392	.215	.611	.583	.546	.505	.477	.222
Lower surface	145.00	.483	.479	.447	.410	.381	.179	.538	.536	.496	.459	.432	.224
	150.00	.461	.437	.409	.367	.347	.119	.519	.493	.463	.418	.399	.164
Upper surface	155.00	.434	.392	.365	.326	.305	.053	.482	.446	.419	.379	.357	.101
	160.00	.363	.349	.324	.285	.261	.007	.417	.402	.381	.339	.325	.066
Lower surface	165.00	.318	.298	.209	.190	.206	-.012	.372	.298	.293	.303	.263	.032
	170.00	.201	.201	.205	.188	.161	-.034	.352	.120	.298	.260	.215	.017
Upper surface	175.00	.186	.186	.174	.132	.094	.007	.239	.052	.692	.214	.170	.012
	180.00	.154	.145	.127	.109	.047	.197	.204	.182	.188	.031	.147	.004
Lower surface	185.00	.11*	.11*	.088	.049	.004	.172	.137	.162	.140	.094	.096	.100
	190.00	.062	.074	.049	.007	.047	.173	.10*	.121	.099	.044	.002	.141
Upper surface	195.00	.010	.018	-.011	-.059	-.105	-.254	.043	.066	.037	-.019	-.064	-.225
	200.00	.069	-.047	.100	-.173	-.200	.292	-.031	.000	-.044	-.135	-.164	-.244

CONFIDENTIAL

~~CONFIDENTIAL~~
TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P_c , at:														
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
CONFIDENTIAL														
Upper surface	Lower surface	K = 0.90	K = -2.02°	H = 0.90	H = -0.04°	H = 0.90	H = -3.91°	H = 0.90	H = -2.02°	H = 0.90	H = -0.04°	H = 0.90	H = -3.91°	
0.00	0.00	.037	.016	.613	.374	.509	.371	.057	.702	.669	.654	.505	.623	
1.25	0.00	.311	.231	.248	.273	.269	.288	.238	.101	.099	.110	.075	.130	
2.50	0.00	.249	.193	.146	.167	.141	.141	.172	.047	.039	.02	.025	.019	
3.75	0.00	.181	.099	.096	.101	.094	.111	.107	.078	.000	.006	.016	.007	
5.00	0.00	.106	.046	.027	.030	.049	.062	.045	.003	.004	.004	.004	.003	
6.25	0.00	.073	.017	.014	.004	.071	.073	.026	.029	.061	.058	.020	.037	
7.50	0.00	.030	.017	.039	.033	.063	.051	.057	.005	.022	.082	.114	.204	
8.75	0.00	.011	.001	.029	.057	.067	.080	.037	.066	.092	.121	.145	.251	
10.00	0.00	.061	.071	.071	.090	.099	.123	.110	.083	.100	.154	.331		
11.25	0.00	.056	.071	.093	.107	.125	.124	.089	.107	.127	.140	.206		
12.50	0.00	.075	.082	.113	.130	.145	.147	.104	.119	.144	.164	.248		
13.75	0.00	.085	.095	.135	.148	.171	.195	.104	.119	.125	.176	.212		
15.00	0.00	.075	.114	.146	.164	.188	.192	.101	.126	.174	.180	.193		
16.25	0.00	.082	.131	.167	.187	.200	.169	.100	.128	.184	.195	.230		
17.50	0.00	.128	.156	.142	.145	.163	.165	.100	.121	.155	.169	.116		
18.75	0.00	.100	.172	.120	.120	.116	.019	.111	.117	.105	.102	.063		
20.00	0.00	.093	.097	.098	.086	.062	.022	.094	.093	.022	.022	.041		
21.25	0.00	.076	.069	.067	.053	.044	.035	.050	.028	.051	.010	.016		
22.50	0.00	.020	.020	.008	.009	.029	.005	.009	.007	.018	.034	.028		
23.75	0.00	.017	.010	.026	.045	.038	.005	.030	.024	.043	.057	.030		
25.00	0.00	.018	.297	.464	.502	.587	.1067	.158	.076	.147	.282	.433	.493	
26.25	0.00	.038	.234	.208	.208	.210	.208	.098	.107	.145	.188	.232		
27.50	0.00	.060	.253	.253	.310	.421	.459	.027	.042	.094	.145	.292		
28.75	0.00	.078	.193	.243	.313	.332	.451	.009	.060	.112	.165	.335		
30.00	0.00	.118	.173	.233	.321	.347	.516	.029	.022	.134	.174	.374		
31.25	0.00	.129	.172	.226	.327	.338	.415	.047	.091	.128	.169	.261		
32.50	0.00	.131	.171	.235	.327	.342	.433	.083	.091	.147	.200	.288		
33.75	0.00	.147	.192	.238	.327	.347	.452	.080	.124	.156	.224	.238		
35.00	0.00	.197	.241	.280	.320	.347	.471	.135	.175	.225	.247	.500		
36.25	0.00	.236	.259	.300	.326	.346	.478	.175	.204	.233	.264	.207		
37.50	0.00	.245	.268	.298	.326	.346	.486	.182	.207	.237	.264	.165		
38.75	0.00	.254	.264	.294	.323	.344	.488	.194	.207	.221	.220	.127		
40.00	0.00	.258	.268	.292	.322	.344	.497	.202	.218	.219	.180	.104		
41.25	0.00	.260	.271	.299	.329	.345	.508	.217	.236	.237	.236	.087		
42.50	0.00	.297	.226	.270	.302	.332	.505	.265	.284	.285	.285	.208		
43.75	0.00	.234	.248	.296	.320	.342	.515	.226	.246	.256	.260	.126		
45.00	0.00	.234	.229	.270	.310	.333	.515	.241	.257	.267	.267	.126		
46.25	0.00	.219	.214	.228	.287	.325	.528	.217	.236	.247	.247	.088		
47.50	0.00	.217	.226	.270	.302	.332								

TABLE L - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:														
		0.16b/2	0.25 b/2	0.40b/2	0.50b/2	0.78b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.50b/2	0.75b/2	0.95b/2	
Percent														
	c	M = 0.90	a = 5.86*					M = 0.90				a = 7.82*		
<i>-Upper surface-</i>														
0.00	.042	.395	.235	.184	.100	.448	.044	.222	.044	.044	.197	.308		
1.25	.205	-1.051	-1.179	-1.198	-1.240	-.079	.426	-1.111	-1.309	-1.318	-1.055	-1.18		
2.50	.266	-.817	-1.055	-1.110	-1.151	-1.007	.580	-1.233	-1.261	-1.261	-1.036	-1.656		
5.00	.410	-.616	-.909	-.939	-.949	-.968	.540	-1.060	-1.039	-1.177	-1.177	-1.652		
10.00	.390	-.392	-.724	-.747	-.762	-.941	.512	-1.027	-1.027	-1.176	-1.176	-1.648		
15.00	.386	-.380	-.601	-.697	-.731	-.917	.512	-1.027	-1.027	-1.090	-1.090	-1.642		
20.00	.275	-.346	-.422	-.621	-.831	-.893	.399	-1.248	-1.248	-1.284	-1.284	-1.632		
25.00	.153	-.334	-.389	-.524	-.672	-.814	.409	-1.233	-1.233	-1.262	-1.262	-1.625		
30.00	.402	-.359	.407	.457	.748	.700	.484	-1.452	-1.492	-1.516	-1.516	-1.619		
35.00	.348	-.378	.417	.464	.697	.686	.458	-1.466	-1.490	-1.520	-1.520	-1.614		
40.00	.374	-.386	.436	.479	.557	.665	.466	-1.473	-1.500	-1.522	-1.522	-1.614		
45.00	.382	-.389	.444	.492	.551	.567	.466	-1.475	-1.503	-1.540	-1.540	-1.612		
50.00	.570	-.389	.445	.504	.497	.504	.461	-1.471	-1.495	-1.544	-1.544	-1.593		
55.00	.332	-.408	.463	.514	.469	.475	.413	-1.483	-1.544	-1.595	-1.595	-1.581		
60.00	.413	-.417	.476	.514	.478	.428	.471	-1.470	-1.470	-1.480	-1.480	-1.560		
65.00	.290	-.416	.458	.539	.460	.368	.477	-1.470	-1.470	-1.420	-1.420	-1.526		
70.00	.346	-.343	.353	.593	.400	.336	.453	-1.470	-1.470	-1.384	-1.384	-1.517		
75.00	.325	-.326	.365	.565	.412	.357	.451	-1.470	-1.470	-1.305	-1.305	-1.513		
80.00	.226	-.107	.065	.040	.053	.184	.184	-1.470	-1.470	-1.216	-1.216	-1.492		
85.00	.070	-.052	.020	.004	.050	.220	.118	.511	.093	.232	.037	.463		
90.00	-.017	-.018	.015	.024	.015	.260	.058	.045	.179	.172	.472			
95.00	.026	.017	.043	.059	.012	.239	.009	.022	.007	.147	.287	.449		
<i>-Lower surface-</i>														
1.25	.51*	.508	.489	.515	.545	.448	.630	.621	.590	.603	.617	.508		
2.50	.453	.403	.406	.416	.432	.369	.582	.521	.515	.521	.521	.492		
5.00	.394	.332	.372	.329	.345	.301	.510	.436	.426	.423	.423	.377		
10.00	.334	.241	.306	.206	.220	.196	.499	.390	.358	.358	.358	.308		
15.00	.227	.188	.110	.071	.074	.081	.317	.272	.256	.256	.256	.255		
20.00	.140	.125	.125	.094	.122	.111	.216	.192	.162	.162	.162	.073		
25.00	.124	.086	.085	.086	.086	.046	.192	.154	.133	.119	.119	.047		
30.00	.064	.054	.056	.012	.009	.135	.118	.121	.101	.095	.077	.066		
35.00	.055	.034	.013	.014	.013	.190	.113	.076	.078	.053	.051	.123		
40.00	.035	.027	.011	.043	.040	.230	.107	.059	.050	.030	.020	.171		
45.00	.025	.025	.009	.009	.008	.244	.076	.006	.018	.006	.016	.196		
50.00	.019	.019	.063	.081	.112	.212	.003	.009	.006	.119	.051	.195		
55.00	.019	.019	.059	.090	.123	.201	.004	.019	.025	.087	.087	.203		
60.00	.072	.057	.036	.075	.091	.186	.047	.037	.043	.057	.057	.183		
65.00	.049	.041	.043	.050	.010	.124	.042	.032	.034	.058	.029	.189		
70.00	.038	.021	.015	.021	.049	.069	.037	.025	.044	.102	.141			
75.00	.008	.001	.004	.004	.017	.098	.023	.013	.061	.094	.181			
80.00	.028	.010	.097	.024	.003	.022	.007	.004	.009	.051	.114	.174		
<i>-Upper surface-</i>														
0.00	.037	#02*	.176	.124	.181	.124	.025	-.211	-.462	-.634	.784	.111		
1.25	.492	-.137	-.123	-.102	-.826	-.594	.651	-.143	-.143	-.097	.790	.577		
2.50	-.572	-.151	-.333	-.105	-.832	-.592	.752	-.149	-.149	-.092	.793	.577		
5.00	.720	-.107	.125	-.103	-.803	-.584	.902	-.122	-.143	-.093	.757	.513		
10.00	.690	-.874	-.187	-.187	-.798	-.579	.850	-.147	-.115	-.090	.742	.565		
15.00	-.653	-.759	-.143	-.102	-.811	-.579	.808	-.108	-.101	-.082	.760	.563		
20.00	-.522	-.720	-.910	-.900	-.759	-.579	.675	-.073	-.073	-.060	.560	.465		
25.00	-.469	-.619	-.205	.914	-.722	-.579	.586	-.061	-.061	-.057	.563	.465		
30.00	-.527	-.669	-.718	-.848	-.774	-.584	.539	-.041	-.041	-.037	.567	.469		
35.00	-.501	-.686	-.820	-.744	-.737	-.586	.539	-.032	-.032	-.026	.571	.470		
40.00	-.522	-.692	-.713	-.755	-.733	-.586	.537	-.027	-.027	-.023	.574	.470		
45.00	-.497	-.390	-.505	-.676	-.718	-.587	.579	-.024	-.024	-.021	.577	.474		
50.00	-.497	-.442	-.575	-.650	-.652	-.591	.548	-.024	-.024	-.021	.580	.478		
55.00	-.437	-.487	-.568	-.640	-.677	-.589	.500	-.041	-.041	-.034	.582	.484		
60.00	-.494	-.509	-.551	-.621	-.639	-.583	.537	-.044	-.044	-.038	.589	.484		
65.00	-.426	-.428	-.523	-.588	-.699	-.573	.538	-.035	-.035	-.031	.692	.485		
70.00	-.465	-.498	-.497	-.545	-.601	-.588	.520	-.017	-.017	-.017	.692	.485		
75.00	-.413	-.443	-.440	-.507	-.584	-.576	.420	-.010	-.010	-.010	.697	.485		
80.00	-.391	-.392	-.392	-.507	-.584	-.566	.449	-.009	-.009	-.009	.690	.480		
85.00	-.229	-.235	-.362	-.496	-.533	-.554	.373	-.039	-.039	-.030	.629	.500		
90.00	-.141	-.163	-.225	-.416	-.508	-.550	.280	-.034	-.034	-.034	.607	.494		
95.00	-.073	-.106	-.163	-.393	-.484	-.530	.184	-.230	-.234	-.237	.598	.487		
<i>-Lower surface-</i>														
1.25	.733	.709	.660	.655	.651	.542	.615	.773	.713	.689	.688	.545		
2.50	.701	.610	.595	.505	.584	.483	.799	.690	.663	.663	.626	.471		
5.00	.624	.525	.508	.493	.495	.422	.719	.600	.576	.582	.494	.409		
7. m	.434	.434	.440	.423	.440	.360	.631	.562	.562	.492	.492	.359		
10.00	.480	.414	.394	.384	.384	.347	.574	.414	.398	.420	.420	.249		
15.00	.303	.319	.279	.254	.253	.191	.395	.214	.207	.220	.220	.141		
20.00	.327	.311	.329	.254	.253	.191	.395	.214	.207	.220	.220	.141		
25.00	.290	.259	.231	.203	.212	.186	.352	.200	.207	.227	.227	.141		
30.00	.259	.212	.198	.177	.174	.010	.314	.205	.200	.221	.221	.141		
35.00	.179	.182	.160	.130	.130	.019	.227	.205	.200	.221	.221	.141		
40.00	.173	.252	.128	.100	.100	.077	.223	.204	.200	.208	.208	.150		
45.00	.165	.114	.100	.071	.067	.124	.211	.183	.149	.120	.120	.082		
50.00	.095	.081	.071	.039	.029	.156	.143	.128	.117	.090	.072	.115		
60.00	.066	.057	.026	.021	.003	.164	.010	.009	.091	.049	.049	.081		
65.00	.056	.035	.021	.003	.041	.183	.101	.073	.065	.065	.005	.151		
70.00	.020	.020	.014	.009	.031	.204	.048	.049	.020	.020	.029	.175		
75.00	-.006	-.006	-.026	-.032	-.087	-.192	.022	.077	.022	.020	.037	.037	.010	
80.00	-.022	-.020	-.034	-.032	-.098	-.208	.031	-.006	-.075	-.020	-.020	-.020	.191	
85.00	-.034	-.024	-.031	-.031	-.099	-.160	.030	-.018	-.024	-.024	-.024	-.024	.150	
90.00	-.020	-.030	-.042	-.075	-.115	-.193	.044	-.037	-.049	-.072	-.107	.201		
95.00	-.024	-.035	-.047	-.217	-.148	-.195	.078	-.082	-.117	-.149	-.149	.197		

CONFIDENTIAL

TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:													
Percent	M = 0.90						M = 0.90						
c	$\alpha = 15.46^\circ$			$\alpha = 17.43^\circ$			$\alpha = 0.90$			$\alpha = 17.43^\circ$			
	0.16b/2	0.25 b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	
UPPER SURFACE	0.00	.02*	-.674	-.899	-1.011	-.691	-.492	.010	-.814	.967	-.787	-.667	-.601
	1.16	-.880	-.177	-.92	-.730	-.659	-.560	-.813	-.862	-.789	-.657	-.650	-.583
	2.00	-.1004	-.1200	-.916	-.730	-.659	-.560	-.799	-.867	-.740	-.715	-.647	-.584
	5.00	-.1169	-.1180	-.890	-.710	-.647	-.558	-.807	-.872	-.794	-.696	-.645	-.582
	7.00	-.1076	-.1120	-.880	-.710	-.648	-.558	-.810	-.841	-.792	-.691	-.644	-.583
	10.00	-.982	-.1090	-.890	-.710	-.647	-.558	-.810	-.840	-.792	-.691	-.644	-.583
	15.00	-.737	-.1046	-.890	-.710	-.647	-.558	-.810	-.840	-.792	-.691	-.644	-.583
	20.00	-.737	-.1028	-.882	-.710	-.647	-.558	-.810	-.840	-.792	-.691	-.644	-.583
	25.00	-.679	-.961	-.882	-.710	-.647	-.558	-.810	-.840	-.792	-.691	-.644	-.583
	30.00	-.641	-.074	-.026	-.710	-.635	-.550	-.714	-.822	-.780	-.681	-.639	-.583
	35.00	-.202	-.803	-.207	-.704	-.635	-.562	-.654	-.804	-.736	-.680	-.638	-.520
	40.00	-.583	-.724	-.788	-.699	-.632	-.563	-.625	-.773	-.751	-.680	-.636	-.588
	45.00	-.941	-.676	-.775	-.692	-.632	-.566	-.566	-.753	-.745	-.678	-.638	-.586
	50.00	-.552	-.654	-.764	-.688	-.631	-.567	-.589	-.722	-.736	-.677	-.638	-.532
	55.00	-.567	-.610	-.750	-.687	-.628	-.568	-.583	-.729	-.672	-.638	-.639	-.596
	60.00	-.580	-.593	-.729	-.671	-.628	-.570	-.599	-.704	-.689	-.669	-.639	-.596
	65.00	-.578	-.573	-.719	-.663	-.623	-.562	-.583	-.704	-.689	-.669	-.639	-.597
	70.00	-.521	-.562	-.709	-.653	-.613	-.558	-.599	-.694	-.637	-.608	-.633	-.604
	75.00	-.488	-.557	-.682	-.633	-.593	-.548	-.599	-.694	-.637	-.608	-.632	-.604
	80.00	-.488	-.547	-.665	-.618	-.570	-.538	-.599	-.694	-.637	-.608	-.632	-.602
	85.00	-.494	-.533	-.654	-.605	-.563	-.528	-.599	-.694	-.637	-.608	-.632	-.602
	90.00	-.511	-.512	-.639	-.591	-.561	-.504	-.594	-.612	-.673	-.653	-.618	-.608
	95.00	-.271	-.464	-.613	-.567	-.512	-.481	-.484	-.582	-.663	-.658	-.625	-.609
Lower surface	1.25	.928	.051	.775	.719	.678	.586	.459	.876	.708	.724	.689	.335
	2.00	.964	.799	.769	.714	.684	.562	1.014	.879	.779	.737	.701	.572
	5.00	.876	.724	.893	.825	.764	.534	.918	.726	.699	.667	.597	.535
	10.00	.697	.600	.853	.803	.734	.439	.820	.621	.608	.589	.547	.471
	15.00	.603	.543	.845	.788	.745	.394	.820	.660	.640	.565	.540	.460
	20.00	.527	.500	.451	.422	.422	.277	.578	.545	.504	.476	.440	.314
	25.00	.471	.432	.402	.378	.373	.211	.522	.487	.456	.431	.414	.230
	30.00	.431	.324	.360	.338	.328	.146	.477	.441	.414	.392	.370	.122
	35.00	.386	.263	.319	.294	.260	.119	.388	.393	.370	.343	.323	.155
	40.00	.336	.204	.251	.217	.210	.055	.382	.354	.325	.306	.292	.093
	45.00	.312	.169	.216	.217	.210	.005	.355	.316	.297	.267	.251	.032
	50.00	.245	.227	.207	.179	.125	.035	.258	.273	.257	.200	.212	.001
	55.00	.204	.194	.179	.126	.125	.035	.232	.238	.228	.164	.164	.025
	60.00	.170	.168	.120	.123	.123	.037	.188	.190	.182	.143	.109	.072
	65.00	.111	.111	.096	.091	.091	.013	.142	.150	.134	.111	.080	.090
	70.00	.088	.075	.063	.049	.012	.117	.118	.108	.100	.078	.064	.107
	75.00	.061	.052	.039	.020	.009	.144	.086	.084	.077	.057	.020	.127
	80.00	.030	.028	.021	.003	.037	.131	.052	.058	.052	.031	.009	.116
	85.00	.007	.006	.022	.033	.061	.174	.014	.022	.008	.006	.042	.166
	90.00	-.053	-.059	-.068	-.098	-.112	-.180	-.018	-.040	-.043	-.078	-.098	-.174
Upper surface	0.00	-.014	-.814	-.778	-.771	-.796	-.667	-.092	-.820	-.814	-.784	-.750	
	1.25	-.752	-.753	-.758	-.762	-.699	-.653	-.819	-.819	-.807	-.777	-.722	
	2.00	-.738	-.752	-.753	-.753	-.646	-.654	-.808	-.824	-.813	-.778	-.721	
	5.00	-.725	-.752	-.753	-.753	-.630	-.654	-.808	-.825	-.819	-.775	-.715	
	7.00	-.720	-.753	-.749	-.730	-.692	-.654	-.808	-.827	-.810	-.775	-.711	
	10.00	-.734	-.753	-.753	-.753	-.685	-.655	-.808	-.828	-.811	-.775	-.712	
	15.00	-.742	-.769	-.759	-.728	-.692	-.650	-.814	-.833	-.810	-.776	-.720	
	20.00	-.732	-.769	-.759	-.728	-.692	-.650	-.811	-.833	-.811	-.776	-.719	
	30.00	-.732	-.764	-.720	-.720	-.690	-.657	-.811	-.833	-.811	-.776	-.719	
	35.00	-.718	-.768	-.720	-.724	-.691	-.659	-.815	-.833	-.811	-.776	-.719	
	40.00	-.693	-.765	-.720	-.726	-.691	-.661	-.743	-.831	-.811	-.776	-.719	
	45.00	-.681	-.759	-.726	-.694	-.658	-.658	-.709	-.820	-.811	-.776	-.725	
	50.00	-.686	-.749	-.723	-.695	-.656	-.661	-.709	-.811	-.811	-.776	-.726	
	55.00	-.647	-.740	-.754	-.718	-.700	-.667	-.689	-.801	-.817	-.786	-.764	
	60.00	-.652	-.738	-.754	-.718	-.700	-.667	-.718	-.815	-.815	-.776	-.728	
	65.00	-.647	-.731	-.749	-.734	-.697	-.664	-.705	-.787	-.813	-.777	-.765	
	70.00	-.635	-.718	-.746	-.714	-.694	-.659	-.693	-.810	-.810	-.776	-.729	
	75.00	-.621	-.709	-.731	-.714	-.694	-.658	-.676	-.805	-.805	-.776	-.720	
	80.00	-.624	-.703	-.711	-.714	-.695	-.677	-.681	-.811	-.754	-.759	-.762	
	85.00	-.622	-.694	-.726	-.709	-.681	-.681	-.685	-.793	-.773	-.776	-.773	
	90.00	-.553	-.651	-.719	-.713	-.689	-.683	-.652	-.707	-.707	-.773	-.757	
Lower surface	1.25	.911	.898	.793	.712	.642	.567	.948	.091	.783	.695	.800	.546
	2.00	1.068	.885	.807	.741	.698	.570	1.050	.908	.816	.743	.692	.580
	5.00	.968	.850	.700	.714	.684	.567	.990	.860	.793	.733	.698	.570
	7.00	.879	.769	.719	.677	.652	.533	.998	.803	.754	.704	.713	.547
	10.00	.006	.725	.679	.643	.613	.495	.840	.781	.729	.676	.656	.534
	15.00	.714	.653	.616	.584	.553	.422	.749	.691	.639	.622	.568	.449
	20.00	.638	.589	.557	.525	.506	.393	.679	.629	.605	.563	.541	.381
	30.00	.581	.509	.436	.476	.456	.368	.622	.547	.505	.478	.452	.321
	40.00	.520	.466	.438	.416	.391	.307	.576	.534	.508	.478	.452	.258
	45.00	.445	.421	.392	.370	.358	.295	.489	.494	.463	.451	.445	.249
	48.00	.414	.413	.370	.370	.348	.294	.480	.452	.420	.387	.442	.143
	50.00	.414	.374	.343	.370	.326	.264	.441	.413	.389	.350	.334	.100
	55.00	.347	.332	.306	.270	.257	.207	.391	.363	.346	.312	.293	.105
	60.00	.304	.274	.234	.209	.169	.021	.339	.330	.316	.286	.245	.037
	65.00	.231	.260	.234	.209	.169	.021	.225	.247	.247	.203	.003	
	70.00	.177	.224	.205	.171	.132	.043	.227	.244	.242	.210	.166	.022
	75.00	.132	.201	.176	.158	.118	.068	.220	.236	.215	.184	.149	.048
	78.00	.160	.144	.143	.117	.080	.089	.188	.184	.177	.149	.117	.069
	80.00	.092	.131	.116	.088	.057	.057	.156	.152	.157	.127	.070	.098
	85.00	.036	.056	.057	.029	.016	.139	.050	.074	.063	.043	.001	.031
	90.00	.033	.033	.029	.025	.016	.139	.012	.004	.045	.045	.017	.024
	95.00	.005	.013	.020	.005	.079	.167	.012	.002	.045	.045	.017	

TABLE 1.- STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

TABLE L - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:											
0.16b/2		0.25b/2		0.40b/2		0.80b/2		0.75b/3		0.95b/3	
0.16b/2		0.25b/2		0.40b/2		0.80b/2		0.75b/3		0.95b/3	
Upper Surface	c ercos c	K = 0.94	a = -2.02°								
		M = 0.94	a = 0°								
0.00	.041	.701	.465	.609	.549	.456	.056	.730	.678	.685	.625
1.25	.325	.238	.257	.257	.256	.290	.217	.038	.021	.024	.058
2.50	.266	.146	.162	.170	.174	.165	.152	-.013	.029	.045	.060
5.00	.201	.125	.108	.101	.093	.113	.028	-.016	.027	.074	.115
7.50	.167	.089	.076	.059	.046	.068	.060	-.016	.046	.091	.133
10.00	.132	.061	.050	.050	.015	.022	.033	-.025	.067	.111	.161
15.00	.090	.030	.002	.010	-.024	-.060	.013	-.049	-.056	.109	.138
20.00	.040	-.022	-.046	-.023	-.030	-.036	-.004	-.077	-.115	.153	.160
25.00	.004	-.041	-.058	-.060	-.007	-.101	-.053	-.053	-.006	.154	.189
30.00		-.046	-.066	-.084	-.110	-.124	-.041	-.133	-.172	.208	.290
35.00		-.076	-.108	-.137	-.155	-.185	-.104	-.133	-.144	.222	.294
40.00		-.069	-.076	-.108	-.137	-.155	-.142	-.133	-.147	.229	.265
45.00		-.083	-.093	-.134	-.163	-.188	-.146	-.142	-.147	.229	.334
50.00		-.079	-.115	-.162	-.184	-.219	-.136	-.124	-.161	.214	.250
55.00		-.092	-.152	-.190	-.217	-.252	-.136	-.124	-.196	.240	.274
60.00		-.158	-.173	-.193	-.226	-.278	-.138	-.206	-.228	.259	.339
65.00		-.154	-.168	-.198	-.230	-.268	-.137	-.202	-.223	.268	.344
70.00		-.165	-.183	-.193	-.210	-.268	-.139	-.202	-.230	.274	.351
75.00		-.149	-.170	-.188	-.200	-.281	-.125	-.182	-.236	.284	.340
80.00		-.109	-.109	-.137	-.183	-.207	-.125	S182	-.186	.291	.344
85.00		-.093	-.080	-.052	-.067	-.040	-.027	-.098	-.006	.104	.009
90.00		-.022	-.019	-.005	-.007	-.000	-.031	-.011	-.029	.068	.009
95.00		-.022	-.016	-.043	-.072	-.071	-.046	.044	-.041	.072	.108
Lower Surface	c ercos c	K = 0.94	a = -2.02°								
		M = 0.94	a = 0°								
1.25	.063	-.248	-.401	-.727	-.874	-.936	.203	.066	.006	-.037	-.038
2.50	.003	-.195	-.263	-.551	-.742	-.879	.158	.005	-.026	.036	-.058
5.00	-.024	-.131	-.206	-.261	-.421	-.794	.071	.019	-.026	.057	-.035
10.00	-.045	-.138	-.213	-.260	-.397	-.717	.071	-.010	-.048	.084	-.103
15.00	-.083	-.143	-.204	-.259	-.322	-.600	.053	-.027	-.075	.099	-.148
10.M	-.096	-.146	-.204	-.259	-.322	-.615	.005	-.060	-.102	.137	-.178
25.00	-.144	-.149	-.199	-.265	-.314	-.594	.049	-.049	-.103	.146	-.174
30.00	-.125	-.149	-.197	-.263	-.317	-.535	.035	-.079	-.119	.157	-.183
35.00	-.148	-.202	-.239	-.261	-.329	-.511	.087	-.103	-.137	.183	-.245
40.00	-.198	-.202	-.239	-.292	-.329	-.546	.104	-.101	-.158	.200	-.227
45.00	-.169	-.203	-.255	-.317	-.345	-.573	.083	-.132	-.107	.232	-.252
50.00	-.219	-.246	-.208	-.343	-.376	-.594	.146	-.170	-.214	.250	-.281
55.00	-.239	-.268	-.298	-.361	-.407	-.611	.167	-.185	-.231	.269	-.313
60.00	-.270	-.300	-.321	-.379	-.430	-.642	.201	-.220	-.292	.292	-.374
70.00	-.292	-.321	-.331	-.355	-.400	-.648	.274	-.211	-.291	.335	-.378
75.00	-.339	-.320	-.335	-.375	-.421	-.671	.287	-.227	-.291	.335	-.378
80.00	-.305	-.309	-.320	-.319	-.354	-.628	.305	-.220	-.217	.317	-.394
nom	-.213	-.195	-.211	-.211	-.265	-.624	.113	-.089	-.073	-.042	-.010
95.00	-.075	-.050	-.010	-.027	-.034	-.001	-.020	-.006	-.050	-.000	-.034
Upper Surface	c ercos c	K = 0.94	a = 1.92°								
		M = 0.94	a = 3.88°								
0.00	.039	.658	.539	.569	.547	.643	.044	.542	.414	.388	.359
1.25	.015	-.567	-.344	-.511	-.857	-.914	-.054	-.945	-.1079	-.1255	-.176
2.50	.018	-.191	-.223	-.310	-.423	-.516	-.054	-.954	-.1661	-.1023	-.093
5.00	.089	-.121	-.216	-.300	-.420	-.560	-.257	-.401	-.757	-.804	-.104
7.50	.100	-.131	-.224	-.306	-.421	-.561	-.250	-.401	-.757	-.804	-.104
10.M	-.085	-.155	-.225	-.300	-.355	-.503	-.175	-.248	-.321	-.390	-.085
20.00	-.089	-.187	-.234	-.337	-.457	-.607	-.166	-.269	-.344	-.402	-.183
25.00	-.154	-.177	-.236	-.290	-.349	-.507	-.234	-.325	-.380	-.433	-.027
30.00	-.237	-.202	-.251	-.300	-.344	-.548	-.319	-.380	-.433	-.482	-.079
35.00	-.196	-.232	-.284	-.332	-.361	-.536	-.299	-.362	-.425	-.482	-.036
40.00	-.222	-.235	-.274	-.357	-.400	-.607	-.309	-.375	-.430	-.488	-.036
45.00	-.255	-.257	-.298	-.341	-.390	-.571	-.267	-.327	-.382	-.436	-.072
50.00	-.203	-.280	-.320	-.371	-.427	-.628	-.269	-.346	-.400	-.463	-.005
55.00	-.293	-.308	-.340	-.383	-.438	-.610	-.353	-.374	-.415	-.468	-.327
60.00	-.292	-.305	-.348	-.389	-.434	-.616	-.340	-.374	-.416	-.478	-.321
70.00	-.308	-.309	-.344	-.401	-.452	-.611	-.373	-.374	-.416	-.479	-.536
75.00	.301	-.324	-.353	-.395	-.424	-.646	-.366	-.388	-.424	-.475	-.458
80.00	-.288	-.273	-.321	-.372	-.426	-.621	-.387	-.403	-.423	-.474	-.505
85.00	-.215	-.190	-.168	-.118	-.064	-.083	.361	-.357	-.386	-.424	-.358
90.00	-.075	-.058	-.048	.014	-.038	-.006	.061	-.173	-.091	-.091	-.190
95.00	.015	.009	.052	.076	-.081	-.044	-.029	-.038	.003	.024	-.077
Lower Surface	c ercos c	K = 0.94	a = -2.02°								
		M = 0.94	a = 0°								
1.25	.314	.262	.246	.263	.315	.167	.436	.431	.416	.328	.311
2.50	.248	.166	.120	.188	.217	.165	.382	.323	.270	.247	
5.00	.20	.133	.121	.128	.126	.114	.328	.262	.252	.214	
7.50	.163	.090	.074	.081	.090	.053	.277	.209	.197	.156	
10.M	.123	.061	.046	.043	.046	.016	.227	.174	.164	.154	
15.00	.053	.035	.019	.003	.005	.057	.183	.136	.103	.104	
20.00	.045	.005	.027	.040	.043	.140	.134	.077	.054	.064	
25.00	.026	-.008	.045	.082	.067	.224	.108	.031	.021	.023	
30.00	.021	-.024	.049	.082	.067	.224	.095	.031	.021	.023	
40.00	.045	.067	.092	.138	.148	.216	.037	.002	.030	.044	
45.00	.040	.094	.129	.168	.180	.239	.021	.027	.039	.092	
50.00	.104	.131	.154	.194	.207	.279	.040	.105	.168	.202	
55.00	.124	.153	.175	.212	.230	.284	.067	.083	.103	.173	
60.00	.157	.177	.193	.222	.230	.274	.076	.084	.099	.119	
65.00	.157	.177	.195	.222	.230	.282	.097	.109	.136	.177	
70.00	.161	.188	.182	.229	.292	.343	.097	.109	.134	.171	
75.00	.206	.192	.199	.236	.234	.275	.150	.139	.048	.043	
80.00	.183	.091	.159	.223	.222	.182	.124	.116	.124	.167	
85.00	.103	.030	.068	.073	.083	.058	.092	.075	.102	.142	
90.00	.016	.002	.006	.049	.023	.009	.006	.038	.024	.047	
95.00	.011	.002	.041	.049	.070	.058	.005	.013	.013	.016	

TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P_c , at												
Percent	M = 0.94						M = 0.9, $\alpha = 7.80^\circ$					
	0.16b/2	0.25b/2	0.40b/2	0.50b/2	0.75b/2	0.95b/2	0.16b/2	0.25 b/2	0.40b/2	0.50b/2	0.75b/2	
Upper surface												
0.00	.052	.11	.262	.191	.114	.479	.032	.237	.073	.032	.196	
1.25	-.102	-.154	-.251	-.1305	-.1324	-.1082	-.334	-.1338	-.1383	-.1389	-.1404	
2.50	-.260	-.059	-.119	-.1200	-.1260	-.1320	-.412	-.1257	-.1273	-.1339	-.1404	
3.75	-.407	-.750	-.1010	-.1120	-.1168	-.1200	-.568	-.1054	-.1204	-.1263	-.1305	
5.00	-.384	-.408	-.966	-.1063	-.103	-.1179	-.536	-.1069	-.1130	-.1210	-.1244	
6.25	-.361	-.383	-.899	-.1020	-.1091	-.1144	-.509	-.1079	-.1095	-.1165	-.1225	
7.50	-.278	-.346	-.440	-.931	-.1040	-.1076	-.412	-.1098	-.1191	-.1231	-.1254	
8.75	-.257	-.347	-.406	-.905	-.1083	-.1076	-.374	-.1060	-.1162	-.1204	-.1233	
10.00	-.313	-.572	-.400	-.672	-.1068	-.1022	-.445	-.1040	-.1141	-.1176	-.1200	
11.25	-.372	-.449	-.400	-.615	-.972	-.1022	-.451	-.1040	-.1141	-.1176	-.1200	
12.50	-.349	-.411	-.474	-.907	-.939		-.451	-.1058	-.1152	-.1183	-.1207	
DOSS							-.463	-.1062	-.1151	-.1188	-.1207	
13.75	-.373	-.375	-.428	-.470	-.825	-.948	-.457	-.1070	-.1151	-.1188	-.1207	
15.00	-.373	-.382	-.446	-.480	-.675	-.911	-.457	-.1070	-.1151	-.1188	-.1207	
16.25	-.364	-.386	-.452	-.499	-.hos	-.911	-.445	-.1070	-.1151	-.1188	-.1207	
17.50	-.330	-.393	-.408	-.521	-.585	-.910	-.415	-.1070	-.1151	-.1188	-.1207	
18.75	-.414	-.432	-.476	-.528	-.584	-.893	-.501	-.1152	-.1154	-.1188	-.1207	
20.00	-.422	-.454	-.484	-.543	-.577	-.908	-.501	-.1152	-.1155	-.1188	-.1207	
21.25	-.420	-.456	-.477	-.540	-.586	-.909	-.512	-.1152	-.1158	-.1188	-.1207	
22.50	-.417	-.449	-.406	-.534	-.592	-.904	-.491	-.1152	-.1162	-.1188	-.1207	
23.75	-.445	-.463	-.485	-.596	-.592	-.886	-.520	-.1152	-.1162	-.1188	-.1207	
25.00	-.439	-.454	-.485	-.534	-.495	-.505	-.500	-.1152	-.1161	-.1188	-.1207	
26.25	-.439	-.457	-.496	-.528	-.576	-.578	-.500	-.1152	-.1162	-.1188	-.1207	
27.50	-.410	-.432	-.411	-.508	-.109	-.529	-.467	-.1152	-.1162	-.1188	-.1207	
32. m	-.110	-.142	-.110	-.098			-.267	-.132	-.389	-.393	-.373	-.950
Lower surface												
0.00	.565	.566	.535	.555	.585	.474	.667	.660	.629	.627	.636	
1.25	.514	.456	.451	.464	.470	.408	.524	.555	.549	.547	.546	
2.50	.450	.577	.367	.366	.373	.342	.556	.402	.457	.445	.405	
3.75	.394	.517	.306	.305	.317	.262	.487	.403	.395	.352	.350	
5.00	.399	.278	.270	.289	.263	.232	.425	.267	.340	.338	.372	
6.25	.277	.231	.236	.203	.202	.192	.358	.303	.392	.278	.315	
7.50	.224	.213	.194	.194	.194	.192	.327	.277	.327	.227	.308	
8.75	.191	.155	.133	.110	.108	.049	.252	.226	.188	.182	.188	
10.00	.158	.127	.102	.083	.102	.102	.225	.185	.167	.155	.045	
11.25	.096	.093	.073	.046	.035	.118	.145	.141	.129	.107	.069	
12.50	.090	.069	.040	.019	.001	.119	.143	.121	.099	.017	.114	
13.75	.086	.040	.014	.017	-.029	-.247	.134	.091	.072	.040	.020	
15.00	.019	.007	.019	.051	.062	.279	.063	.057	.040	.011	.235	
16.25	-.006	-.015	-.040	-.063	-.104	-.303	-.034	-.027	-.014	-.011	-.261	
22.00	-.017	-.036	-.080	-.083	-.129	-.313	-.028	-.009	-.00*	-.032	-.064	
23.75	-.033	-.052	-.079	-.115	-.163	-.348	-.005	-.012	-.023	-.120	-.317	
25.00	-.035	-.052	-.079	-.115	-.163	-.348	-.005	-.018	-.032	-.124	-.306	
26.25	-.028	-.075	-.080	-.130	-.166	-.331	-.058	-.054	-.043	-.154	-.327	
27.50	-.075	-.061	-.044	-.105	-.153	-.301	-.068	-.094	-.020	-.085	-.146	
28.75	-.047	-.042	-.044	-.077	-.132	-.335	-.063	-.060	-.049	-.132	-.327	
32.00	-.017	-.028	-.012	-.049	-.088	-.265	-.049	-.075	-.071	-.112	-.157	
Upper surface							H = 0.94	$\alpha = 13.46^\circ$				
0.00	.039	.064	.125	.305	.514	.042	.092	.236	.594	.836	.871	
1.25	-.444	-.167	-.183	-.158	-.158	-.130	-.685	-.1417	-.1370	-.1120	-.1017	
2.50	-.552	-.152	-.152	-.154	-.154	-.1402	-.601	-.1381	-.1297	-.1130	-.1039	
3.75	-.508	-.102	-.127	-.127	-.127	-.1317	-.594	-.1328	-.1227	-.1033	-.0939	
5.00	-.630	-.890	-.164	-.124	-.125	-.1347	-.594	-.1266	-.1266	-.1114	-.1046	
6.25	-.611	-.810	-.175	-.124	-.124	-.1326	-.584	-.1219	-.1152	-.1099	-.1046	
7.50	-.513	-.733	-.108	-.124	-.124	-.1296	-.574	-.1152	-.1152	-.1099	-.1046	
8.75	-.460	-.629	-.791	-.1130	-.1204	-.1280	-.643	-.1015	-.1095	-.1046	-.1022	
10.00	-.664	-.581	-.729	-.1114	-.1167	-.1253	-.598	-.682	-.1095	-.1046	-.1022	
11.25	-.509	-.491	-.66	-.108	-.1154	-.1214	-.618	-.521	-.1055	-.1032	-.1025	
12.50	-.481	-.496	-.604	-.1042	-.1142	-.1213	-.591	-.563	-.1038	-.1010	-.0995	
13.75	-.512	-.586	-.582	-.877	-.1140	-.1240	-.607	-.576	-.1018	-.0934	-.0912	
15.00	-.490	-.209	-.572	-.612	-.1158	-.1240	-.570	-.588	-.983	.934	.923	
16.25	-.500	-.571	-.594	-.782	-.1120	-.1240	-.589	-.598	-.924	.910	.909	
17.50	-.547	-.521	-.602	-.779	-.1119	-.1240	-.644	-.637	-.857	.858	.853	
18.75	-.547	-.563	-.606	-.755	-.1034	-.1112	-.641	-.634	-.858	.857	.853	
20.00	-.547	-.566	-.606	-.725	-.1028	-.1116	-.627	-.640	-.856	.857	.853	
21.25	-.535	-.577	-.613	-.706	-.1038	-.1137	-.609	-.643	-.854	.857	.853	
22.50	-.560	-.597	-.614	-.688	-.709	-.1132	-.632	-.643	-.852	.854	.853	
23.75	-.577	-.596	-.616	-.675	-.721	-.1118	-.619	-.614	-.850	.854	.853	
Dow	.561	-.590	-.603	-.658	-.649	-.1119	-.564	-.555	-.540	-.712	-.767	
33.00	-.387	-.489	-.588	-.606	-.592	-.1068	-.588	-.446	-.520	-.604	-.764	
Lower surface												
1.25	.771	.745	.691	.679	.675	.568	.902	.837	.776	.734	.694	
2.50	.745	.647	.620	.617	.607	.518	.909	.769	.755	.706	.682	
3.75	.666	.558	.526	.519	.524	.463	.819	.679	.657	.631	.530	
5.00	.590	.072	.477	.459	.466	.398	.759	.621	.596	.576	.477	
6.25	.522	.454	.436	.422	.411	.342	.638	.574	.536	.517	.430	
7.50	.442	.384	.362	.354	.343	.244	.555	.501	.467	.447	.338	
8.75	.372	.232	.311	.286	.284	.198	.485	.667	.420	.403	.365	
10.00	.320	.238	.267	.246	.239	.088	.436	.407	.378	.350	.192	
11.25	.295	.254	.230	.216	.202	.025	.370	.354	.342	.123	.120	
12.50	.211	.125	.103	.047	.12	.006	.317	.318	.301	.119	.104	
13.75	.111	.124	.124	.139	.130	.004	.231	.249	.241	.229	.054	
15.00	.129	.054	.120	.103	.089	.133	.233	.244	.220	.204	.032	
16.25	.111	.117	.098	.067	.050	.174	.218	.203	.194	.166	.068	
17.50	.096	.091	.074	.047	.012	.198	.124	.177	.171	.145	.100	
18.75	.092	.063	.045	.017	.025	.222	.039	.149	.139	.127	.0115	
20.00	.065	.043	.028	.010	.057	.259	.137	.120	.111	.084	.037	
21.25	.022	.007	.007	.042	.029	.267	.104	.101	.095	.067	.032	
22.50	.002	-.005	-.020	-.049	-.058	-.273	.052	.061	.053	-.004	-.152	
23.75	-.022	-.019	-.025	-.037	-.108	-.232	.036	.039	.041	-.012	-.164	
25.00	-.032	-.017	-.043	-.043	-.108	-.274	.019	.021	.010	-.003	-.045	
26.25	-.073	-.043	-.067	-.102	-.127	-.246	.012	-.023	-.024	-.009	-.083	

CONFIDENTIAL

TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

		Pressure coefficient, P_c											
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
Percent c		$H = 0.94$						$M = 0.94$					
		$\alpha = 15.66^\circ$						$\alpha = 17.76^\circ$					
Upper surface	0.00	.039	.569	.790	-1.037	-1.104	.540	.044	.744	-1.962	-1.948	.221	.733
	1.25	-.819	-1.450	1.181	-.998	-.843	.724	-.116	-1.243	1.007	-.875	-.799	.721
	2.50	-.925	-1.428	1.161	-.971	-.850	.718	-.105	-1.233	1.007	-.851	-.789	.719
	5.00	-1.049	-1.390	1.181	-.973	-.849	.718	-.102	-1.219	1.029	-.841	-.787	.719
	7.50	-1.005	-1.347	1.168	-.973	-.839	.719	-.107	-1.210	1.011	-.833	-.784	.721
	10.00	-.961	-1.297	1.185	-.972	-.860	.719	-.105	-1.188	1.035	-.838	-.784	.719
	12.50	-.816	-1.230	1.098	-.970	-.849	.716	-.096	-1.178	1.035	-.839	-.782	.719
	15.00	-.885	-1.024	1.064	-.975	-.856	.713	-.090	-1.171	1.038	-.836	-.784	.719
	17.50	-.885	-1.024	1.002	-.959	-.856	.720	-.086	-1.055	1.035	-.837	-.777	.718
	20.00	.629	.635	.989	.823	.819	.725	.2	.862	.928	.824	.774	.716
Lower surface	0.00	-.636	-.609	.970	-.880	-.810	.718	.615	.749	-.918	-.821	-.771	.716
	1.25	-.607	.765	-.956	-.852	-.804	.724	-.600	.722	-.904	-.812	-.770	.718
	2.50	-.619	-.634	-.938	-.835	-.803	.722	-.638	-.688	-.887	-.804	-.767	.719
	5.00	-.632	-.635	-.902	-.826	-.796	.720	-.620	-.681	-.863	-.796	-.765	.723
	7.50	-.671	-.654	-.863	-.803	-.795	.719	-.657	-.688	-.859	-.778	-.763	.723
	10.00	-.631	-.641	-.826	-.808	-.792	.723	-.653	-.677	-.817	-.775	-.760	.723
	12.50	-.627	-.635	-.827	-.807	-.791	.724	-.658	-.672	-.808	-.776	-.757	.723
	15.00	-.593	-.634	-.827	-.798	-.783	.715	-.654	-.679	-.796	-.758	-.745	.723
	17.50	-.589	-.634	-.827	-.789	-.784	.714	-.650	-.662	-.786	-.756	-.743	.723
	20.00	-.545	-.560	-.859	-.742	-.744	.717	-.605	-.649	-.757	-.740	-.734	.723
Upper surface	0.00	.391	-.471	.620	-.728	-.737	.714	-.513	-.606	-.728	-.760	-.751	.723
	1.25	.957	.880	.183	.748	.699	.609	.986	.907	.815	.730	.683	.632
	2.50	.895	.828	.183	.743	.707	.588	1.038	S11	.815	.724	.698	.590
	5.00	.893	.750	.718	.685	.663	.545	.953	.007	.762	.724	.689	.591
	7.50	.793	.682	.661	.637	.618	.518	.864	.745	.715	.683	.669	.591
	10.00	.722	.632	.622	.607	.571	.472	.788	.695	.671	.645	.630	.590
	12.50	.629	.590	.590	.569	.509	.394	.871	.560	.589	.560	.550	.555
	15.00	.627	.527	.527	.469	.468	.245	.864	.565	.583	.599	.585	.585
	17.50	.601	.446	.447	.422	.008	.187	.866	.534	.500	.474	.457	.457
	20.00	.458	.422	.404	.354	.327	.187	.524	.478	.440	.438	.415	.390
Lower surface	0.00	.368	.375	.365	.241	.327	.151	.436	.438	.416	.392	.368	.320
	1.25	.366	.342	.330	.306	.288	.084	.420	.397	.385	.355	.336	.335
	2.50	.365	.307	.294	.268	.251	.026	.403	.364	.338	.316	.297	.076
	5.00	.275	.261	.258	.226	.212	-.003	.360	.324	.288	.240	.041	
	7.50	.237	.231	.230	.206	.170	-.030	.297	.290	.278	.253	.213	.015
	10.00	.235	.202	.196	.170	.130	-.030	.292	.258	.245	.220	.179	-.033
	12.50	.186	.172	.177	.164	.104	-.030	.195	.225	.195	.192	.127	-.038
	15.00	.170	.152	.120	.096	.056	-.097	.175	.163	.158	.137	.096	-.074
	17.50	.102	.092	.069	.076	.024	-.127	.147	.144	.114	.072	.092	
	20.00	.066	.070	.052	.058	.012	-.097	.110	.117	.113	.091	.046	.071
Upper surface	0.00	.043	.047	.052	.035	.008	-.153	.075	.089	.081	.058	.021	.125
	1.25	.022	-.001	.005	-.028	-.055	-.144	.045	.029	-.007	-.020	-.131	
	2.50	$H = 0.94$						$H = 0.94$					
	5.00	$\alpha = 19.85^\circ$						$\alpha = 21.85^\circ$					
	7.50	.023	-.921	-.104	-.949	-.848	-.806	.022	1.003	-.964	-.936	-.894	-.860
	10.00	-.002	-.1118	-.0768	-.932	-.855	-.776	.039	-.952	-.945	-.931	-.885	-.832
	12.50	-.019	-.109	-.004	-.880	-.827	-.774	.024	-.924	-.935	-.937	-.896	-.834
	15.00	-.049	1.107	-.997	-.882	-.827	-.774	.029	-.929	-.945	-.943	-.893	-.829
	17.50	-.070	1.077	-.972	-.859	-.824	-.774	.033	-.933	-.955	-.939	-.893	-.829
	20.00	-.096	1.025	-.982	-.863	-.827	-.774	.037	-.939	-.962	-.942	-.904	-.851
Lower surface	0.00	.768	.733	.878	.859	.824	.774	.902	.932	.937	.901	.874	.820
	1.25	.765	.734	.878	.859	.824	.774	.880	.949	.937	.897	.876	.825
	2.50	.766	.734	.878	.859	.824	.774	.878	.944	.937	.894	.874	.824
	5.00	.649	.734	.920	.828	.813	.773	.750	.935	.933	.931	.898	.827
	7.50	.642	.734	.906	.831	.809	.774	.745	.935	.912	.829	.892	.829
	10.00	.649	.734	.873	.818	.807	.770	.711	.896	.828	.858	.870	.831
	12.50	.607	.734	.873	.818	.807	.770	.778	.872	.917	.875	.826	
	15.00	.641	.734	.873	.817	.807	.770	.754	.891	.820	.875	.868	
	17.50	.641	.734	.873	.817	.807	.770	.778	.872	.917	.875	.826	
	20.00	.638	.731	.853	.812	.803	.774	.753	.854	.912	.875	.826	
Upper surface	0.00	.673	.734	.842	.810	.802	.774	.785	.834	.910	.874	.861	.822
	1.25	.673	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	2.50	.673	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	5.00	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	7.50	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	10.00	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	12.50	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	15.00	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	17.50	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
	20.00	.638	.734	.842	.810	.802	.774	.785	.834	.910	.874	.860	.822
Lower surface	0.00	.991	.921	.817	.740	.663	.591	.965	.922	.813	.719	.621	.570
	1.25	.973	.914	.835	.773	.724	.599	1.017	.897	.841	.773	.721	.576
	2.50	.902	.860	.799	.750	.715	.599	1.017	.897	.841	.773	.721	.576
	5.00	.902	.860	.799	.750	.715	.599	1.017	.897	.841	.773	.721	.576
	7.50	.902	.860	.799	.750	.715	.599	1.017	.897	.841	.773	.721	.576
	10.00	.836	.758	.715	.681	.649	.533	.872	.804	.753	.712	.679	.530
	12.50	.743	.686	.653	.626	.591	.463	.781	.733	.697	.658	.628	.456
	15.00	.567	.624	.590	.565	.546	.398	.710	.670	.641	.605	.580	.422
	17.50	.567	.580	.549	.523	.499	.335	.641	.620	.597	.569	.537	.364
	20.00	.574	.536	.507	.474	.457	.225	.624	.580	.539	.529	.494	.301
Upper surface	0.00	.479	.468	.424	.424	.410	.225	.527	.508	.496	.446	.418	.207
	1.25	.479	.468	.424	.424	.410	.225	.527	.508	.496	.446	.418	.207
	2.50	.479	.468	.424	.424	.410	.225	.527	.508	.496	.446	.418	.207
	5.00	.479	.468	.424	.424	.410	.225	.527	.508	.496	.446	.418	.207
	7.50	.479	.468	.424	.424	.410	.225	.527	.508	.496	.446	.418	.207
	10.00	.479	.468	.424	.424	.410	.225	.527	.508	.496	.446	.418	.207
	12.50	.479	.468	.424	.424	.410</td							

TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:											
		M = 0.94						M = 0.94			
		$\alpha = 23.90^\circ$						$\alpha = 25.95^\circ$			
		M = 0.94	0.10b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.10b/2	0.25b/2	0.40b/2	0.60b/2
Upper surface	0.00	-0.904	-1.009	-0.986	-0.964	-0.946	-0.906	-0.312	-1.140	-1.120	-1.100
	1.16	-0.986	-0.994	-0.982	-0.961	-0.939	-0.887	-1.104	-1.129	-1.110	-1.087
	2.32	-0.976	-0.995	-0.979	-0.957	-0.938	-0.883	-1.092	-1.114	-1.102	-1.078
	3.48	-0.973	-0.996	-0.977	-0.953	-0.936	-0.880	-1.091	-1.122	-1.115	-1.070
	4.64	-0.978	-0.999	-0.978	-0.952	-0.930	-0.881	-1.101	-1.119	-1.095	-1.070
	5.80	-0.982	-1.001	-0.979	-0.952	-0.931	-0.883	-1.104	-1.116	-1.102	-1.073
	6.96	-0.980	-1.004	-0.981	-0.950	-0.932	-0.881	-1.097	-1.124	-1.110	-1.078
	8.12	-0.979	-1.003	-0.978	-0.951	-0.931	-0.881	-1.091	-1.126	-1.108	-1.074
	9.28	-0.926	-0.992	-0.918	-0.929	-0.879	-0.879	-1.067	-1.124	-1.110	-1.068
	10.44	-0.892	-0.995	-0.900	-0.915	-0.878	-0.879	-1.069	-1.121	-1.101	-1.063
Lower surface	11.60	-0.817	-0.990	-0.980	-0.943	-0.928	-0.879	-0.843	-1.108	-1.105	-1.056
	12.76	-0.817	-0.976	-0.978	-0.943	-0.923	-0.882	-0.846	-1.01	-1.104	-1.053
	13.92	-0.786	-0.963	-0.977	-0.941	-0.925	-0.882	-0.797	-0.997	-1.097	-1.050
	15.08	-0.779	-0.946	-0.974	-0.940	-0.924	-0.883	-0.768	-0.928	-1.087	-1.044
	16.24	-0.744	-0.929	-0.971	-0.938	-0.921	-0.885	-0.745	-0.975	-1.093	-1.044
	17.40	-0.819	-0.921	-0.969	-0.920	-0.921	-0.885	-0.741	-0.945	-1.070	-1.021
	18.56	-0.826	-0.97	-0.964	-0.92	-0.918	-0.882	-0.720	-0.798	-1.05*	-1.024
	19.72	-0.882	-1.00	-0.927	-0.915	-0.883	-0.885	-0.688	-0.957	-1.043	-1.020
	20.88	-0.777	-0.936	-0.923	-0.918	-0.885	-0.885	-0.649	-0.945	-1.043	-1.003
	22.04	-0.822	-0.707	-0.940	-0.933	-0.935	-0.885	-0.644	-0.704	-0.993	-1.018
Upper surface	23.20	-0.818	-0.948	-0.938	-0.924	-0.879	-0.879	-0.634	-0.683	-0.943	-1.010
	24.36	-0.805	-0.936	-0.924	-0.922	-0.900	-0.882	-0.644	-0.773	-0.930	-0.991
	25.52	-0.895	-0.812	-0.905	-0.918	-0.910	-0.878	-0.524	-0.627	-0.877	-0.918
	26.68	-0.726	-0.926	-0.806	-0.700	-0.603	-0.554	-0.913	-0.925	-0.794	-0.680
	27.84	-0.070	-0.960	-0.774	-0.716	-0.581	-0.581	-1.071	-0.978	-0.867	-0.766
	28.00	1.038	-0.930	-0.857	-0.789	-0.744	-0.606	-1.041	-0.960	-0.874	-0.802
	29.16	-0.971	-0.888	-0.829	-0.771	-0.776	-0.598	-1.008	-0.924	-0.859	-0.794
	30.32	-0.914	-0.867	-0.794	-0.750	-0.712	-0.575	-0.950	-0.890	-0.831	-0.777
	31.48	-0.823	-0.784	-0.740	-0.696	-0.659	-0.516	-0.863	-0.828	-0.760	-0.735
	32.64	-0.706	-0.742	-0.680	-0.648	-0.617	-0.459	-0.803	-0.745	-0.730	-0.684
Lower surface	33.80	-0.663	-0.630	-0.597	-0.564	-0.578	-0.405	-0.788	-0.729	-0.711	-0.613
	34.96	-0.626	-0.597	-0.569	-0.538	-0.545	-0.411	-0.711	-0.682	-0.646	-0.574
	36.12	-0.581	-0.584	-0.558	-0.524	-0.492	-0.308	-0.635	-0.635	-0.605	-0.531
	37.28	-0.566	-0.543	-0.518	-0.480	-0.461	-0.247	-0.518	-0.596	-0.548	-0.527
	38.44	-0.536	-0.502	-0.476	-0.444	-0.424	-0.185	-0.590	-0.561	-0.528	-0.488
	39.60	-0.473	-0.458	-0.439	-0.409	-0.387	-0.153	-0.527	-0.513	-0.491	-0.451
	40.76	-0.432	-0.422	-0.409	-0.377	-0.358	-0.120	-0.484	-0.475	-0.456	-0.421
	41.92	-0.413	-0.385	-0.367	-0.339	-0.297	-0.090	-0.465	-0.437	-0.421	-0.383
	43.08	-0.362	-0.347	-0.337	-0.299	-0.260	-0.058	-0.413	-0.392	-0.368	-0.345
	44.24	-0.327	-0.317	-0.309	-0.276	-0.241	-0.026	-0.374	-0.352	-0.337	-0.308
Upper surface	45.40	-0.277	-0.273	-0.249	-0.246	-0.242	-0.023	-0.329	-0.314	-0.310	-0.282
	46.56	-0.276	-0.273	-0.246	-0.242	-0.242	-0.023	-0.329	-0.314	-0.310	-0.281
	47.72	-0.240	-0.246	-0.236	-0.209	-0.187	-0.026	-0.288	-0.295	-0.287	-0.202
	48.88	-0.191	-0.210	-0.202	-0.177	-0.132	-0.020	-0.238	-0.254	-0.242	-0.161
	50.04	-0.137	-0.164	-0.152	-0.132	-0.086	-0.085	-0.182	-0.204	-0.187	-0.114
	51.20	-0.054	-0.087	-0.066	-0.046	-0.021	-0.100	-0.080	-0.122	-0.119	-0.072
	52.36	-0.087	-0.086	-0.046	-0.021	-0.100	-0.080	-0.122	-0.072	-0.041	-0.084

~~CONFIDENTIAL~~
TABLE I. - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P_c , at													
	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
Percent													
c	H = 0.98	a = -2.00°					M = 0.96	a = -0.08°					
Upper surface													
	.029	.718	.668	.630	.570	.465	.081	.761	.714	.711	.673	.700	
1.00	.345	.259	.273	.288	.271	.327	.208	.088	.062	.024	.120		
2.00	.288	.179	.175	.186	.193	.101	.205	.050	.038	.009	.011	.035	
3.00	.726	.149	.150	.148	.113	.140	.116	.045	.035	.011	.011	.031	
4.00	.200	.115	.103	.056	.043	.049	.091	.037	.015	.025	.070	.084	
5.00	.199	.089	.083	.022	.035	.046	.091	.003	.004	.045	.049	.101	
10.00	.115	.082	.026	.003	.029	.029	.405	.006	.032	.057	.082	.130	
20.00	.052	.017	.015	.013	.013	.102	.404	.024	.061	.054	.115	.165	
25.00	.037	.001	.024	.048	.066	.205	.405	.035	.068	.111	.131	.242	
30.00	.005	.021	.041	.069	.084	.340	.072	.057	.089	.119	.139	.242	
35.00	.030	.046	.064	.082	.112	.259	.060	.084	.108	.124	.164	.246	
40.00	.052	.051	.085	.120	.134	.327	.086	.101	.121	.153	.184	.327	
45.00	.061	.069	.113	.143	.164	.322	.103	.121	.152	.169	.207	.362	
50.00	.049	.102	.172	.169	.194	.330	.068	.106	.153	.194	.231	.301	
55.00	.072	.132	.211	.228	.228	.354	.104	.141	.174	.218	.238	.316	
60.00	.102	.163	.218	.219	.219	.354	.150	.176	.208	.229	.270	.303	
65.00	.147	.199	.187	.197	.197	.365	.181	.176	.209	.250	.280	.330	
70.00	.0160	.170	.198	.228	.292	.357	.178	.123	.216	.258	.306	.334	
75.00	.166	.181	.211	.211	.241	.315	.183	.193	.223	.259	.321	.325	
80.00	.186	.200	.211	.211	.245	.346	.198	.208	.226	.254	.323	.345	
85.00	.209	.190	.211	.245	.307	.361	.223	.208	.226	.253	.304	.369	
90.00	.177	.182	.196	.240	.289	.361	.195	.203	.217	.233	.278	.322	
95.00	.147	.178	.195	.230	.277	.399	.175	.188	.204	.239	.222	.255	
Lower surface													
	.091	.205	.277	.662	.859	.915	.225	.090	.019	.033	.070	.118	
2.00	.024	.167	.225	.584	.732	.830	.225	.042	.002	.056	.105	.122	
8.00	.006	.094	.173	.241	.434	.766	.137	.055	.005	.034	.073	.127	
7.80	.01*	.128	.184	.253	.268	.693	.104	.026	.019	.060	.077	.136	
10.00	.054	.116	.183	.238	.294	.601	.070	.008	.040	.073	.009	.132	
15.00	.070	.120	.181	.243	.28*	.597	.041	.005	.042	.083	.101	.146	
20.00	.099	.120	.187	.263	.309	.377	.001	.019	.067	.114	.126	.193	
25.00	.124	.130	.178	.262	.288	.377	.017	.019	.075	.111	.127	.232	
30.00	.107	.142	.190	.260	.293	.319	.036	.045	.089	.113	.142	.244	
40.00	.126	.178	.217	.270	.320	.391	.056	.065	.139	.149	.188	.359	
45.00	.182	.200	.268	.300	.341	.397	.087	.086	.100	.157	.207	.359	
50.00	.200	.224	.268	.326	.360	.385	.112	.120	.167	.223	.235	.311	
55.00	.220	.245	.284	.339	.381	.381	.131	.152	.180	.233	.271	.329	
60.00	.253	.272	.303	.360	.399	.407	.156	.182	.208	.253	.291	.354	
65.00	.268	.277	.316	.377	.422	.417	.175	.192	.217	.275	.308	.360	
70.00	.275	.267	.314	.345	.414	.405	.183	.180	.217	.265	.207	.240	
75.00	.324	.302	.360	.375	.428	.390	.238	.215	.223	.270	.328	.325	
80.00	.328	.333	.330	.309	.408	.394	.240	.235	.244	.280	.339	.337	
85.00	.345	.360	.351	.369	.392	.397	.252	.232	.271	.321	.359	.377	
90.00	.325	.294	.381	.394	.382	.370	.240	.235	.244	.269	.317	.332	
95.00	.225	.274	.293	.313	.334	.343	.170	.211	.232	.277	.289	.323	
Upper surface							M = 0.98	a = -3.2a°					
	.064	.712	bob	.616	.600	.680	.069	.610	.488	.445	.458	.643	
1.18	.150	.113	.260	.614	.701	.584	.021	.779	.587	.582	.232	.782	
2.00	.087	.143	.224	.372	.612	.764	.041	.386	.195	.89	.904	.998	
7.80	.010	.107	.160	.348	.342	.659	.12	.303	.521	.723	.904	.952	
10.00	.027	.077	.175	.220	.377	.630	.158	.318	.240	.694	.784	.848	
15.00	.022	.081	.165	.245	.372	.630	.099	.201	.271	.307	.688	.808	
20.00	.024	.095	.175	.240	.285	.333	.165	.193	.253	.307	.427	.792	
25.00	.036	.115	.187	.257	.274	.347	.246	.211	.258	.311	.341	.740	
35.00	.133	.139	.199	.231	.200	.292	.207	.233	.276	.313	.353	.666	
40.00	.153	.174	.235	.290	.313	.378	.253	.261	.308	.359	.390	.700	
45.00	.181	.188	.250	.298	.331	.329	.250	.261	.308	.359	.390	.656	
50.00	.160	.187	.258	.318	.252	.354	.237	.262	.318	.386	.414	.600	
55.00	.143	.214	.275	.353	.372	.357	.247	.267	.347	.389	.445	.500	
60.00	.124	.242	.277	.377	.385	.353	.247	.312	.347	.389	.451	.519	
65.00	.143	.244	.300	.350	.374	.361	.302	.314	.347	.408	.462	.588	
70.00	.143	.250	.303	.252	.374	.368	.311	.337	.353	.407	.446	.534	
75.00	.245	.312	.355	.391	.391	.323	.311	.327	.375	.407	.445	.588	
80.00	.269	.282	.316	.350	.371	.368	.336	.342	.361	.404	.463	.581	
85.00	.222	.280	.302	.338	.317	.330	.359	.342	.361	.404	.463	.583	
90.00	.181	.249	.207	.290	.300	.335	.237	.312	.341	.363	.338	.401	
Lower surface													
	.351	.306	.267	.264	.337	.261	.449	.455	.445	.463	.504	.411	
2.50	.397	.214	.202	.213	.271	.204	.416	.357	.359	.375	.393	.341	
5.00	.223	.147	.149	.165	.165	.193	.134	.298	.295	.289	.300	.230	
7.20	.217	.139	.104	.113	.124	.102	.314	.246	.238	.234	.247	.210	
10.00	.176	.112	.074	.077	.087	.084	.066	.070	.065	.074	.081	.131	
15.00	.136	.086	.045	.010	.001	.050	.221	.176	.178	.093	.141	.005	
20.00	.099	.055	.017	.009	.028	.051	.174	.178	.128	.093	.104	.002	
25.00	.076	.044	.009	.045	.051	.054	.130	.111	.095	.065	.065	.081	
30.00	.023	.065	.040	.100	.079	.100	.043	.094	.070	.045	.103	.131	
40.00	.023	.020	.038	.240	.209	.240	.063	.058	.041	.015	.029	.201	
45.00	.008	.040	.051	.138	.124	.130	.062	.040	.019	.019	.044	.081	
50.00	.052	.076	.122	.145	.159	.921	.005	.135	.127	.053	.055	.258	
55.00	.074	.098	.142	.179	.11W	.134	.025	.047	.046	.093	.129	.212	
60.00	.108	.124	.166	.221	.224	.327	.052	.068	.085	.117	.155	.325	
65.00	.115	.137	.126	.175	.210	.339	.060	.020	.054	.135	.183	.340	
70.00	.115	.137	.191	.228	.277	.331	.066	.079	.059	.136	.187	.343	
75.00	.149	.162	.207	.240	.293	.327	.130	.118	.127	.157	.214	.343	
80.00	.149	.178	.207	.247	.247	.327	.135	.127	.137	.180	.232	.348	
85.00	.193	.178	.207	.247	.247	.327	.134	.127	.137	.183	.249	.297	
90.00	.177	.182	.207	.247	.247	.327	.102	.122	.137	.141	.183	.245	
95.00	.130	.139	.198	.239	.277	.273	.102	.122	.137	.198	.239	.304	

~~CONFIDENTIAL~~

TABLE 1.- STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:													
	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
Percent c	K = 0.98	a = 5.93*						K = 0.98	a = 7.9P				
Upper surface													
0.00	.071	.101	-1.097	-1.142	-1.179	-1.244		.075	.119	.157	.197	.234	.277
1.25	-.122	-1.010	-1.097	-1.142	-1.179	-1.244		-.243	-1.084	-1.132	-1.192	-1.223	-1.281
2.50	-.168	-0.907	-1.093	-1.088	-1.109	-1.158		-.320	-1.084	-1.132	-1.192	-1.223	-1.281
5.00	-.333	-0.688	-0.919	-0.979	-1.010	-1.105		-.473	-0.813	-1.063	-1.118	-1.170	-1.221
7.50	-.316	-0.311	-0.846	-0.93	-0.962	-1.034		-.445	-0.547	-0.663	-1.070	-1.101	-1.16*
10.00	-.290	-0.312	-0.795	-0.302	-0.936	-1.008		-.416	-0.463	-0.964	-1.036	-1.081	-1.139
12.50	-.216	-0.286	-0.383	-0.821	-0.908	-0.978		-.325	-0.405	-0.877	-0.964	-1.024	-1.106
15.00	-.197	-0.251	-0.286	-0.383	-0.821	-0.908		-.256	-0.374	-0.534	-0.911	-1.002	-1.082
20.00	-.257	-2.00	-0.349	-0.785	-0.870	-0.950		-.351	-0.437	-0.606	-0.861	-0.941	-1.032
25.00	-.262	-0.201	-0.349	-0.759	-0.827	-0.938		-.356	-0.436	-0.606	-0.859	-0.946	-1.032
30.00	-.261	-0.108	-0.349	-0.759	-0.801	-0.879		-.304	-0.435	-0.535	-0.833	-0.924	-1.027
40.00	-.317	-0.124	-0.370	-0.415	-0.501	-0.839		-.375	-0.403	-0.463	-0.558	-0.822	-0.930
45.00	-.324	-0.128	-0.383	-0.423	-0.523	-0.805		-.345	-0.419	-0.474	-0.547	-0.717	-0.930
50.00	-.310	-0.350	-0.399	-0.441	-0.546	-0.809		-.375	-0.403	-0.463	-0.558	-0.822	-0.930
60.00	-.290	-0.411	-0.461	-0.523	-0.808	-0.793		-.429	-0.444	-0.484	-0.540	-0.839	-0.923
65.00	-.262	-0.377	-0.424	-0.468	-0.519	-0.793		-.432	-0.447	-0.483	-0.546	-0.717	-0.929
70.00	-.373	-0.301	-0.456	-0.486	-0.516	-0.800		-.436	-0.451	-0.490	-0.545	-0.845	-0.934
75.00	-.364	-0.399	-0.433	-0.482	-0.521	-0.807		-.416	-0.458	-0.497	-0.542	-0.843	-0.932
80.00	-.356	-0.408	-0.433	-0.482	-0.520	-0.801		-.453	-0.477	-0.497	-0.545	-0.844	-0.937
85.00	-.349	-0.404	-0.435	-0.482	-0.509	-0.783		-.473	-0.477	-0.497	-0.547	-0.849	-0.936
90.00	-.338	-0.316	-0.422	-0.466	-0.450	-0.757		-.456	-0.488	-0.510	-0.582	-0.850	-0.940
95.00	-.313	-0.384	-0.222	-0.455	-0.403	-0.775		-.373	-0.454	-0.488	-0.524	-0.824	-0.924
Lower surface													
1.25	.983	.559	.557	.571	.600	.501		.692	.683	.682	.662	.557	.854
2.50	.439	.482	.473	.482	.497	.431		.652	.583	.567	.560	.571	.492
5.00	.420	.406	.329	.390	.403	.372		.586	.493	.374	.465	.475	.423
7.50	.420	.347	.330	.326	.344	.303		.519	.431	.419	.404	.416	.365
10.00	.387	.297	.292	.290	.289	.180		.459	.390	.382	.363	.383	.311
12.50	.387	.255	.245	.250	.233	.160		.383	.310	.321	.307	.321	.231
15.00	.255	.245	.197	.172	.194	.164		.305	.229	.226	.203	.211	.114
20.00	.223	.160	.129	.109	.108	.050		.263	.222	.197	.173	.190	.057
25.00	.120	.127	.097	.072	.070	.070		.186	.186	.164	.133	.127	.020
30.00	.121	.105	.071	.043	.053	.144		.174	.124	.097	.070	.064	.058
40.00	.117	.073	.039	.012	.010	.201		.105	.090	.070	.020	.024	.019
45.00	.050	.029	.008	.020	.024	.235		.074	.063	.049	.020	.013	.017
50.00	.026	.011	.035	.039	.062	.260		.066	.014	.019	.007	.042	.027
65.00	.010	.009	.032	.063	.054	.273		.047	.013	.004	.032	.078	.026
70.00	.017	.024	.054	.084	.126	.301		.039	.009	.009	.043	.085	.027
75.00	.019	.062	.059	.091	.129	.308		.07	.015	.004	.061	.11	.026
80.00	.029	.073	.095	.129	.156	.310		.037	.021	.040	.068	.14	.028
85.00	.096	.073	.087	.137	.200	.322		.037	.027	.046	.074	.14	.027
90.00	.083	.077	.087	.135	.200	.325		.037	.039	.046	.074	.14	.027
95.00	.088	.083	.097	.144	.189	.290		.059	.053	.058	.097	.12	.027
	K = 0.98	a = 9.91"						K = 0.98	a = 13.68"				
0.00	.070	.147	.021	.193	.372	.154		.040	.22*	.481	.706	.800	.107
1.25	-.357	-1.255	.527	-1.265	-1.250	-1.280		.084	.282	.282	.157	.157	.107
2.50	-.167	-1.047	.450	-1.265	-1.250	-1.270		.161	.247	.247	.124	.124	.107
5.00	-.207	-0.887	.780	-1.083	-1.103	-1.124		.228	.187	.187	.127	.127	.111
7.50	-.346	-0.247	.450	-1.066	-1.120	-1.124		.187	.212	.212	.124	.124	.107
10.00	-.331	-0.479	.527	-1.066	-1.120	-1.124		.217	.171	.171	.124	.124	.107
12.50	-.240	-0.527	.527	-1.066	-1.120	-1.124		.174	.199	.199	.124	.124	.107
15.00	-.391	-0.540	.728	-1.026	-1.092	-1.161		.334	-1.000	-1.059	-1.110	-1.193	-1.260
20.00	-.294	-0.484	.645	-1.099	-1.053	-1.112		.559	-0.922	-1.024	-1.125	-1.193	-1.260
25.00	-.440	-0.444	.559	-0.984	-1.038	-1.112		.516	-0.651	-0.632	-1.097	-1.163	-1.265
30.00	-.440	-0.444	.559	-0.984	-1.038	-1.112		.546	-0.646	-0.632	-1.061	-1.140	-1.253
40.00	-.430	-0.442	.537	-0.986	-1.038	-1.104		.520	-0.593	-0.565	-1.080	-1.117	-1.254
45.00	-.448	-0.440	.537	-0.986	-1.038	-1.104		.518	-0.582	-0.566	-1.081	-1.116	-1.250
50.00	-.448	-0.440	.537	-0.986	-1.038	-1.104		.518	-0.582	-0.566	-1.081	-1.116	-1.250
60.00	-.448	-0.449	.525	-1.10	-1.011	-1.031		.560	-0.523	-0.523	-1.081	-1.143	-1.250
65.00	-.448	-0.449	.525	-1.10	-1.011	-1.031		.560	-0.523	-0.523	-1.081	-1.143	-1.250
70.00	-.487	-0.494	.534	-1.054	-1.008	-1.007		.592	-0.592	-0.592	-1.017	-1.107	-1.250
75.00	-.490	-0.499	.534	-1.054	-1.008	-1.011		.596	-0.600	-0.600	-0.968	-1.058	-1.250
80.00	-.490	-0.506	.538	-0.555	-0.892	-1.016		.588	-0.605	-0.655	-0.931	-1.020	-1.064
85.00	-.472	-0.516	.549	-0.539	-0.503	-1.025		.566	-0.619	-0.616	-0.916	-1.045	-1.045
90.00	-.510	-0.535	.551	-0.529	-0.738	-1.025		.619	-0.641	-0.602	-0.893	-0.925	-1.032
95.00	-.514	-0.537	.546	-0.539	-0.592	-0.531		.625	-0.644	-0.604	-0.878	-0.928	-1.034
0.00	.070	.147	.021	.193	.372	.154		.040	.22*	.481	.706	.800	.107
1.25	.785	.761	.712	.702	.699	.599		.029	.874	.805	.768	.726	.637
2.50	.759	.668	.645	.637	.532	.547		.039	.803	.746	.754	.605	
5.00	.606	.580	.568	.542	.547	.491		.058	.724	.689	.666	.652	.572
7.50	.611	.514	.501	.483	.400	.420		.054	.654	.631	.600	.571	
10.00	.546	.476	.459	.426	.440	.379		.064	.614	.590	.546	.550	.475
15.00	.468	.411	.388	.302	.379	.283		.060	.538	.504	.462	.442	.385
20.00	.495	.378	.342	.317	.320	.201		.050	.504	.462	.442	.432	.307
25.00	.325	.324	.296	.245	.238	.129		.049	.479	.456	.418	.399	.387
30.00	.325	.401	.298	.245	.238	.064		.044	.392	.377	.364	.349	.247
35.00	.325	.417	.298	.193	.188	.165		.032	.356	.200	.206	.227	.039
40.00	.340	.417	.298	.193	.188	.165		.032	.357	.201	.206	.227	.039
45.00	.322	.419	.183	.160	.129	.092		.037	.297	.271	.247	.234	.007
50.00	.322	.162	.123	.101	.094	.125		.027	.267	.234	.214	.214	.024
55.00	.127	.120	.110	.080	.092	.132		.028	.214	.194	.160	.160	.051
60.00	.091	.094	.062	.027	.013	.178		.029	.197	.183	.194	.117	.076
70.00	.075	.063	.048	.012	.003	.209		.023	.182	.164	.163	.052	.107
75.00	.053	.035	.015	.049	.049	.221		.015	.150	.184	.141	.117	.021
80.00	.037	.022	.014	.020	.020	.235		.014	.114	.110	.099	.094	.035
85.00	.003	.004	.014	.020	.020	.238		.009	.093	.092	.091	.035	.042
90.00	-.032	-.022	-.021	-.059	-.075	.203		.047	.069	.065	.054	.054	.036
95.00	-.032	-.022	-.021	-.059	-.075	.203		.047	.069	.065	.054	.054	.022

TABLE I - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:															
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		0.16	b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
Percent	c	23 = 0.98	a = 15.134°					M = 0.98	a = 17.97°						
UPPER SURFACE	0.00	.024	-1.474	-.696	-1.943	-1.065	-.716	.011	-.660	-.872	-1.078	-1.163	-.904		
	1.25	.112	-1.345	-1.293	-1.231	-1.123	-1.011	.139	-1.324	-1.276	-1.133	-1.031	-.914		
	2.50	.183	-1.345	-1.263	-1.278	-1.128	-1.004	.145	-1.306	-1.254	-1.122	-1.031	-.909		
	5.00	.246	-1.292	-1.253	-1.224	-1.124	-1.	.162	-1.290	-1.257	-1.114	-1.038	-.904		
	10.00	.306	-1.253	-1.266	-1.224	-1.115	-.994	.182	-1.255	-1.245	-1.114	-1.041	-.903		
	15.00	.356	-1.203	-1.266	-1.231	-1.123	-.994	.193	-1.268	-1.264	-1.105	-1.049	-.902		
	20.00	.374	-1.150	-1.207	-1.222	-1.120	-.994	.201	-1.223	-1.229	-1.091	-1.075	-.901		
	25.00	.383	-1.105	-1.160	-1.159	-1.159	-.994	.209	-1.184	-1.200	-1.087	-1.057	-.897		
	30.00	.386	-1.057	-1.085	-1.164	-1.094	-.994	.217	-1.187	-1.188	-1.065	-1.056	-.892		
	35.00	.380	-1.048	-1.081	-1.142	-1.081	-.994	.225	-1.184	-1.177	-1.049	-1.047	-.888		
	40.00	.353	-1.056	-1.132	-1.087	-1.087	-.994	.233	-1.167	-1.051	-1.037	-1.037	-.880		
	45.00	.371	-1.044	-1.117	-1.107	-1.056	-.994	.241	-1.158	-1.000	-1.033	-1.033	-.870		
	50.00	.393	-1.035	-1.102	-1.040	-1.040	-.993	.249	-1.144	-0.979	-1.020	-1.020	-.869		
	55.00	.426	-1.007	-1.083	-1.020	-0.971	-.993	.257	-1.118	-0.968	-1.006	-1.006	-.861		
	60.00	.458	-1.045	-1.002	-0.963	-.963	-.993	.265	-0.991	-1.033	-0.948	-0.948	-.877		
	65.00	.483	-1.063	-0.836	-0.981	-0.956	-.993	.273	-0.891	-0.943	-0.975	-0.971	-.871		
	70.00	.533	-1.072	-0.886	-0.952	-0.949	-.993	.281	-0.708	-0.922	-0.943	-0.943	-.871		
	75.00	.579	-1.092	-0.924	-0.952	-0.949	-.993	.289	-0.684	-0.918	-0.929	-0.928	-.868		
	80.00	.617	-1.098	-0.937	-0.952	-0.952	-.993	.297	-0.660	-0.707	-0.914	-0.904	-.865		
	85.00	.646	-1.098	-0.917	-0.938	-0.932	-.993	.305	-0.656	-0.707	-0.890	-0.880	-.869		
	90.00	.686	-1.088	-0.867	-0.864	-0.958	-.994	.313	-0.611	-0.707	-0.890	-0.894	-.866		
	95.00	.738	-1.084	-0.821	-0.849	-0.954	-.994								
LOWER SURFACE	1.25	.977	.906	.828	.775	.719	.655	1.015	.538	.546	.578	.715	.643		
	2.50	1.010	.859	.806	.747	.732	.618	1.033	.909	.040	.479	.532	.636		
	5.00	.720	.741	.712	.685	.597	.597	1.051	.981	.000	.473	.532	.627		
	10.00	.330	.734	.668	.664	.657	.575	1.069	.733	.000	.473	.532	.621		
	15.00	.754	.801	.759	.563	.540	.427	1.087	.725	.603	.600	.595	.533		
	20.00	.539	.567	.529	.496	.484	.351	1.095	.617	.669	.636	.614	.547		
	25.00	.542	.502	.475	.425	.443	.290	1.098	.601	.572	.536	.513	.4*		
	30.00	.493	.457	.435	.420	.401	.225	1.105	.557	.523	.493	.478	.458		
	35.00	.407	.413	.396	.375	.358	.192	1.108	.468	.456	.431	.411	.344		
	40.00	.407	.379	.362	.338	.325	.128	1.108	.464	.442	.420	.393	.383		
	45.00	.384	.341	.327	.298	.289	.084	1.108	.440	.407	.385	.355	.320		
	50.00	.322	.306	.291	.263	.253	.006	1.108	.380	.365	.321	.303	.253		
	55.00	.276	.271	.260	.209	.197	.006	1.108	.330	.308	.284	.260	.229		
	60.00	.210	.202	.181	.153	.137	.027	1.108	.284	.267	.238	.217	.183		
	65.00	.152	.152	.152	.102	.101	.076	1.108	.241	.252	.238	.207	.187		
	70.00	.134	.139	.185	.162	.101	.085	1.108	.191	.183	.184	.158	.135		
	75.00	.173	.145	.155	.118	.101	.085	1.108	.129	.121	.124	.104	.099		
	80.00	.150	.148	.140	.120	.080	.101	1.108	.158	.165	.124	.100	.087		
	85.00	.117	.126	.123	.101	.056	.056	1.108	.118	.131	.115	.076	.064		
	90.00	.095	.100	.097	.000	.041	.023	1.108	.118	.135	.131	.091	.076		
	95.00	.062	.056	.057	.023	.001	.110		.075	.084	.083	.051	.029	.004	
UPPER SURFACE	M = 0.98	a = 20.13°						M = 0.98	a = 22.24°						
	0.00	.027	.859	-1.407	-1.159	-1.047	-0.911	.104	.981	-1.141	-1.055	-0.980	-0.974		
	1.25	.171	-1.333	-1.288	-1.106	-1.004	-0.908	.1052	-1.205	-1.190	-1.049	-0.982	-0.943		
	2.50	.1072	-1.315	-1.265	-1.108	-1.004	-0.907	.1433	-1.236	-1.195	-1.044	-0.977	-0.945		
	5.00	.1443	-1.314	-1.285	-1.107	-1.003	-0.907	.1482	-1.232	-1.095	-1.034	-0.980	-0.941		
	10.00	.1107	-1.309	-1.259	-1.101	-1.001	-0.906	.1499	-1.229	-1.132	-1.036	-0.975	-0.945		
	15.00	.1120	-1.294	-1.281	-1.103	-0.997	-0.908	.1518	-1.223	-1.172	-0.939	-0.973	-0.942		
	20.00	.952	-1.274	-1.020	-1.020	-0.999	-0.908	.1537	-1.210	-1.168	-1.020	-0.993	-0.941		
	25.00	.702	-1.227	-1.231	-1.075	-1.000	-0.907	.1556	-1.189	-1.128	-1.031	-0.989	-0.937		
	30.00	.700	-1.238	-1.212	-1.032	-0.990	-0.906	.1575	-1.181	-1.128	-1.021	-0.989	-0.937		
	35.00	.658	-1.238	-1.181	-1.060	-0.986	-0.904	.1594	-1.176	-1.122	-1.021	-0.984	-0.935		
	40.00	.705	-1.693	-1.153	-1.048	-0.981	-0.907	.1613	-1.177	-1.104	-1.021	-0.987	-0.929		
	45.00	.673	-1.695	-1.117	-1.034	-0.977	-0.905	.1632	-1.103	-1.082	-1.023	-0.981	-0.923		
	50.00	.678	-1.677	-1.086	-1.026	-0.974	-0.904	.1651	-1.063	-1.063	-1.023	-0.980	-0.922		
	55.00	.725	-1.667	-1.055	-1.014	-0.967	-0.906	.1670	-1.020	-1.046	-1.002	-0.978	-0.920		
	60.00	.725	-1.668	-1.035	-0.995	-0.965	-0.906	.1689	-1.024	-1.030	-0.938	-0.963	-0.923		
	65.00	.708	-1.698	-1.009	-0.981	-0.958	-0.907	.1708	-1.024	-1.046	-1.000	-0.956	-0.929		
	70.00	.645	-1.735	-1.052	-0.986	-0.956	-0.906	.1727	-1.024	-1.046	-1.000	-0.951	-0.924		
	75.00	.777	-1.717	-1.016	-0.978	-0.942	-0.904	.1746	-1.024	-1.046	-1.000	-0.951	-0.924		
	80.00	.721	-1.782	-1.088	-0.977	-0.924	-0.900	.1765	-1.024	-1.046	-1.000	-0.951	-0.921		
	85.00	.782	-1.857	-0.967	-0.909	-0.902		.1784	-1.024	-1.046	-1.000	-0.951	-0.921		
	90.00	.769	-1.836	-0.961	-0.930	-0.902		.1803	-1.024	-1.046	-1.000	-0.951	-0.921		
	95.00	.704	-1.769	-0.933	-0.903	-0.902		.1822	-1.024	-1.046	-1.000	-0.951	-0.921		
LOWER SURFACE	1.25	1.021	.947	.846	.764	.627	.621	1.002	.957	.844	.749	.667	.604		
	2.50	1.025	.920	.865	.804	.754	.630	1.006	.971	.882	.804	.725	.625		
	5.00	.922	.832	.730	.678	.588	.589	1.007	.947	.832	.741	.604	.539		
	10.00	.744	.743	.719	.674	.572	.572	1.008	.913	.826	.721	.603	.523		
	15.00	.779	.793	.747	.715	.688	.572	1.009	.913	.840	.752	.671	.597		
	20.00	.779	.722	.688	.638	.629	.504	1.009	.954	.774	.734	.671	.626		
	25.00	.655	.622	.586	.561	.542	.379	1.009	.705	.669	.633	.602	.568		
	30.00	.610	.575	.500	.524	.499	.316	1.009	.662	.623	.592	.543	.536		
	35.00	.531	.451	.403	.478	.438	.222	1.009	.594	.589	.552	.523	.500		
	40.00	.522	.452	.466	.443	.426	.222	1.009	.542	.508	.448	.416	.393		
	45.00	.496	.457	.409	.468	.408	.129	1.009	.484	.406	.446	.411	.393		
	50.00	.411	.393	.369	.405	.359	.127	1.009	.377	.339	.343	.314	.275		
	55.00	.380	.363	.363	.343	.305	.093	1.009	.343	.343	.343	.312	.250		

TABLE L - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:													
	1.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
'BERDN C		0.98		$\alpha = 24.37^\circ$				M = 0.98		$\alpha = 26.48^\circ$			
Upper surface		H	a										
0.00	-1.159	-1.095	1.225	-1.100	-1.072	-1.001		.227	-1.104	-1.180	-1.132	-1.107	-1.038
1.00	-1.151	-1.090	1.171	-1.090	-1.052	-0.974		.169	-1.103	-1.173	-1.122	-1.095	-1.030
2.00	-1.156	-1.094	1.153	-1.089	-1.050	-0.970		.171	-1.104	-1.175	-1.124	-1.091	-1.030
3.00	-1.158	-1.094	1.170	-1.089	-1.050	-0.970		.174	-1.104	-1.178	-1.126	-1.089	-1.026
4.00	-1.153	-1.095	1.146	-1.082	-1.044	-0.970		.166	-1.101	-1.166	-1.115	-1.083	-1.025
5.00	-1.150	-1.095	1.153	-1.082	-1.042	-0.968		.167	-1.102	-1.180	-1.137	-1.115	-1.078
6.00	-1.149	-1.092	1.157	-1.082	-1.042	-0.968		.168	-1.102	-1.189	-1.141	-1.111	-1.076
7.00	-1.149	-1.092	1.157	-1.082	-1.042	-0.968		.169	-1.102	-1.189	-1.141	-1.111	-1.076
8.00	-1.149	-1.074	1.207	-1.153	-1.077	-1.044		.169	-1.102	-1.189	-1.141	-1.111	-1.076
9.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
10.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
15.00	-1.148	-1.074	1.207	-1.153	-1.077	-1.044		.169	-1.102	-1.189	-1.141	-1.111	-1.076
20.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
25.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
30.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
35.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
40.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
45.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
50.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
55.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
60.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
65.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
70.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
75.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
80.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
85.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
90.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
95.00	-1.148	-1.076	1.153	-1.067	-1.045	-0.944		.169	-1.102	-1.189	-1.141	-1.111	-1.076
Lower surface													
0.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.912*	1.95*	1.82*	1.15	.808	34*
1.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
2.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
3.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
4.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
5.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
6.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
7.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
8.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
9.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
10.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
15.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
20.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
25.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
30.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
35.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
40.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
45.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
50.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
55.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
60.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
65.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
70.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
75.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
80.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
85.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
90.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*
95.00	-1.158	-1.068	1.266	-1.093	-1.026	-0.952		.900	1.907	1.82*	1.15	.808	34*

THE INDEPENDENT

~~CONFIDENTIAL~~
TABLE I - STEEL WING PRESSURE COEFFICIENT DATA FORT = TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P_c , at:												
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	0.16b/2	0.25b/2	0.40b/2	0.50b/2	0.75b/2
Percent		c		M = 1.00		$\alpha = -2.00^\circ$		M = 1.09		$\alpha = -0.04^\circ$		
Upper surface		K		1.00		$\alpha = -2.00^\circ$		M = 1.09		$\alpha = -0.04^\circ$		
0.00		.074		.758		.708		.675		.616		.538
1.25		.374		.520		.556		.520		.509		.217
2.50		.273		.192		.179		.170		.150		.154
3.75		.242		.162		.147		.121		.106		.090
5.00		.211		.129		.114		.100		.076		.000
6.25		.182		.107		.080		.074		.054		.014
7.50		.152		.071		.048		.041		.033		.013
8.75		.121		.044		.031		.021		.015		.004
10.00		.100		.024		.013		.010		.005		.000
11.25		.081		.011		.006		.004		.002		.000
12.50		.062		.007		.004		.002		.001		.000
13.75		.043		.005		.002		.001		.000		.000
15.00		.022		.002		.001		.000		.000		.000
16.25		.011		.001		.000		.000		.000		.000
17.50		.000		.000		.000		.000		.000		.000
18.75		.000		.000		.000		.000		.000		.000
20.00		.000		.000		.000		.000		.000		.000
21.25		.000		.000		.000		.000		.000		.000
22.50		.000		.000		.000		.000		.000		.000
23.75		.000		.000		.000		.000		.000		.000
25.00		.000		.000		.000		.000		.000		.000
26.25		.000		.000		.000		.000		.000		.000
27.50		.000		.000		.000		.000		.000		.000
28.75		.000		.000		.000		.000		.000		.000
30.00		.000		.000		.000		.000		.000		.000
31.25		.000		.000		.000		.000		.000		.000
32.50		.000		.000		.000		.000		.000		.000
33.75		.000		.000		.000		.000		.000		.000
35.00		.000		.000		.000		.000		.000		.000
36.25		.000		.000		.000		.000		.000		.000
37.50		.000		.000		.000		.000		.000		.000
38.75		.000		.000		.000		.000		.000		.000
40.00		.000		.000		.000		.000		.000		.000
41.25		.000		.000		.000		.000		.000		.000
42.50		.000		.000		.000		.000		.000		.000
43.75		.000		.000		.000		.000		.000		.000
45.00		.000		.000		.000		.000		.000		.000
46.25		.000		.000		.000		.000		.000		.000
47.50		.000		.000		.000		.000		.000		.000
48.75		.000		.000		.000		.000		.000		.000
50.00		.000		.000		.000		.000		.000		.000
51.25		.000		.000		.000		.000		.000		.000
52.50		.000		.000		.000		.000		.000		.000
53.75		.000		.000		.000		.000		.000		.000
55.00		.000		.000		.000		.000		.000		.000
56.25		.000		.000		.000		.000		.000		.000
57.50		.000		.000		.000		.000		.000		.000
58.75		.000		.000		.000		.000		.000		.000
6												

TABLE L - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P, at:													
	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.85b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
Percent c	N = 1.00	a = 5.90°					53 = 1.00					7.90°	
0.00	.055	.504	.308	.253	.577		.062	.133	.191	.086	.034	.400	
1.25	-.073	-.974	-1.062	-1.117	-1.137	-1.187	-.210	-.139	-1.197	-1.229	-1.253	-1.283	-1.224
2.50	.139	-.868	-.943	-1.022	-.073	-1.127	-.287	1.070	-.100	1.050	1.218	1.253	1.224
5.00	.272	-.588	-.848	-.919	-.938	-1.062	-.436	-.798	1.019	1.078	1.137	1.171	1.204
7.50	.256	-.482	-.008	-.885	-.930	-.996	-.407	-.536	-.957	1.028	1.076	1.143	1.174
10.00	.240	-.263	-.761	-.853	-.917	-.963	-.377	-.444	-.928	1.095	1.064	1.110	1.174
15.00	.161	-.237	-.318	-.355	-.878	-.935	-.285	-.373	-.851	1.025	1.019	1.074	1.174
20.00	-.144	-.237	-.297	-.760	-.839	-.905	-.259	-.346	-.489	1.087	1.072	1.1045	
25.00	.202	-.131	-.291	-.596	-.798	-.899	.207	-.331	-.422	1.066	1.035	1.034	
30.00	.266	-.143	-.243	-.108	-.778	-.854	-.345	-.331	-.379	1.046	1.016	1.007	
35.00	.226	-.157	-.277	-.304	-.767	-.801	-.337	-.331	-.369	1.047	1.017	1.022	
40.00	.167	-.157	-.248	-.336	-.731	-.769	-.337	-.363	-.403	1.059	1.039	1.055	
45.00	.254	-.184	-.347	-.191	-.505	-.772	-.334	-.366	-.410	1.079	1.059	1.065	
50.00	.264	-.197	-.358	-.410	-.482	-.772	-.346	-.385	-.420	1.081	1.069	1.091	
55.00	.315	-.332	-.170	-.416	-.477	-.760	-.372	-.410	-.457	1.099	1.087	1.092	
60.00	.320	-.339	-.377	-.431	-.465	-.772	-.398	-.414	-.445	1.056	1.040	1.032	
65.00	.324	-.336	-.375	-.431	-.477	-.776	-.402	-.402	-.441	1.066	1.040	1.039	
70.00	.311	-.347	-.384	-.430	-.402	-.778	-.401	-.427	-.455	1.056	1.044	1.038	
75.00	.347	-.367	-.382	-.434	-.487	-.770	-.400	-.445	-.492	1.071	1.068	1.058	
80.00	.372	-.367	-.237	-.430	-.469	-.767	-.402	-.442	-.494	1.060	1.053	1.013	
85.00	.393	-.366	-.316	-.422	-.412	-.760	-.424	-.444	-.494	1.085	1.074	1.048	
90.00	.271	-.350	-.376	-.403	-.470	-.742	-.344	-.428	-.474	1.076	1.051	1.029	
Lower surface													
0.00	.611	.617	.589	.603	.625	.820	.713	.713	.677	.673	.679	.577	
1.25	.570	.509	.508	.515	.526	.497	.680	.607	.603	.597	.593	.516	
2.50	.516	.438	.428	.425	.425	.434	.614	.525	.514	.505	.502	.457	
5.00	.460	.379	.362	.368	.328	.551	.464	.454	.446	.446	.442	.389	
10.00	.406	.346	.302	.322	.315	.277	.492	.431	.420	.398	.356		
15.00	.347	.298	.202	.267	.258	.184	.426	.368	.366	.367	.222	.240	
20.00	.281	.230	.188	.217	.198	.166	.366	.291	.326	.379	.220	.240	
30.00	.238	.194	.172	.152	.154	.022	.294	.250	.245	.213	.024		
35.00	.161	.161	.130	.113	.097	.036	.212	.173	.202	.173	.034		
40.00	.161	.137	.111	.054	.072	.104	.215	.189	.172	.145	.127		
45.00	.158	.107	.058	.052	.036	.169	.207	.159	.140	.111	.095		
50.00	.092	.073	.049	.024	W	.197	.137	.121	.107	.078	.041		
55.00	.069	.063	.030	.004	.035	.227	.104	.034	.028	.045	.017		
60.00	.047	.026	.000	.000	.041	.062	.102	.070	.063	.035	.011		
65.00	.028	.000	.000	.000	.000	.000	.073	.051	.047	.004			
70.00	.008	.005	.019	.004	.000	.000	.027	.009	.004	.000			
75.00	.004	.001	.007	.001	.000	.000	.026	.007	.002	.001			
80.00	.004	.001	.007	.001	.000	.000	.026	.007	.002	.001			
85.00	.008	.004	.000	.000	.000	.000	.004	.000	.000				
90.00	.048	.007	.000	.000	.000	.000	.020	.000	.000				
Upper surface													
0.00	.049	.179	0.00*	-.153	-.285	.191	-.028	.191	.191	.191	.191	.191	
1.25	-.241	-1.212	-1.233	-1.220	-1.240	-1.262	-.474	-.182	-.170	-.171	-.171	-.166	
2.50	-.559	-.142	-.163	-.126	-.161	-.151	-.474	-.136	-.136	-.136	-.136	-.136	
5.00	-.559	-.194	-.162	-.162	-.133	-.154	-.734	-.108	-.137	-.137	-.137	-.129	
7.50	-.489	-.723	-.1024	-.1076	-.1120	-.1175	-.699	-.128	-.109	-.109	-.109	-.109	
10.00	.391	-.550	-.035	-.1016	-.085	-.140	-.574	-.049	-.1029	-.1105	-.2152		
15.00	.338	-.476	-.675	-.982	-.049	-.1116	-.499	-.864	-.964	-.042	-.132	-.1209	
20.00	.335	-.440	-.604	-.360	-.1006	-.1006	-.480	-.003	-.923	-.0188	-.1083		
25.00	.312	-.597	-.549	-.943	-.993	-.1074	-.473	-.850	-.870	.970	-.1063	-.1115	
30.00	.405	-.398	-.456	-.788	-.978	-.988	-.492	-.475	-.475	-.824	-.924	-.1035	
35.00	.392	-.408	-.458	-.692	-.970	-.981	-.485	-.497	-.497	-.809	-.910	-.1060	
40.00	.342	-.408	-.458	-.692	-.970	-.981	-.501	-.523	-.523	-.809	-.902	-.1051	
45.00	.345	-.448	-.481	-.670	-.949	-.973	-.501	-.523	-.523	-.809	-.902	-.1051	
50.00	.454	-.455	-.491	-.649	-.947	-.965	-.567	-.564	-.564	-.882	-.892	-.1064	
55.00	.454	-.459	-.489	-.636	-.949	-.972	-.550	-.582	-.582	-.877	-.882	-.1042	
60.00	.460	-.465	-.495	-.617	-.862	-.977	-.552	-.562	-.562	-.876	-.871	-.1022	
65.00	.439	-.476	-.507	-.534	-.703	-.985	-.543	-.570	-.570	-.863	-.871	-.1007	
70.00	.452	-.494	-.512	-.573	-.619	-.986	-.569	-.596	-.596	-.855	-.863	-.930	
75.00	.482	-.497	-.505	-.555	-.555	-.993	-.583	-.595	-.595	-.843	-.852	-.926	
80.00	.287	-.446	-.505	-.594	-.510	-.1014	-.496	-.349	-.349	-.867	-.877	-.1019	
Lower surface													
0.00	.799	.786	.756	.724	.719	.817	.944	.890	.824	.765	.747	.657	
1.25	.174	.161	.672	.658	.657	.566	.957	.623	.784	.758	.731	.624	
2.50	.705	.608	.587	.571	.370	.516	.874	.740	.710	.685	.670	.589	
5.00	.430	.580	.523	.504	.512	.653	.787	.673	.653	.671	.671	.535	
10.00	.70	.505	.487	.468	.459	.396	.724	.638	.617	.591	.574	.604	
15.00	.492	.440	.422	.406	.397	.305	.625	.587	.544	.529	.510	.407	
20.00	.426	.367	.348	.345	.329	.279	.555	.527	.481	.484	.451	.350	
25.00	.282	.215	.200	.217	.204	.152	.500	.499	.405	.423	.386	.264	
30.00	.249	.228	.200	.200	.194	.189	.445	.445	.388	.388	.382	.278	
35.00	.262	.244	.226	.187	.191	.005	.434	.434	.353	.353	.351	.267	
40.00	.262	.244	.226	.187	.191	.005	.434	.434	.353	.353	.351	.267	
45.00	.255	.212	.190	.166	.159	.002	.402	.386	.353	.353	.351	.267	
50.00	.183	.175	.162	.124	.125	.008	.377	.290	.218	.218	.211	.163	
55.00	.151	.147	.134	.114	.083	.123	.255	.251	.242	.242	.222	.183	
60.00	.150	.168	.111	.084	.045	.146	.235	.221	.211	.211	.163	.052	
65.00	.119	.102	.073	.061	.013	.184	.214	.194	.192	.191	.163	.081	
70.00	.091	.093	.076	.067	.007	.179	.0175	.182	.174	.174	.163	.093	
75.00	.073	.063	.055	.025	.022	.185	.160	.151	.147	.128	.078	.102	
80.00	.071	.049	.015	.032	.140	.140	.104	.135	.134	.100	.065	.115	
85.00	.029	.034	.043	.040	.011	.037	.026	.067	.066	.066	.065	.064	
90.00	.014	.009	.015	.019	.046	.174	.067	.062	.079	.065	.065	.007	

TABLE I - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P_c , at:															
	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2		
arcenc c	H = 1.00	$\alpha = 15.93^\circ$						H = 1.00	$\alpha = 18.03^\circ$						
Upper surface															
0.00	-0.054	-4423	.645	-788	-1.008	-0.663		-0.772	-.613	-.826	-1.042	-1.124	-4879		
1.25	-0.657	-1.280	-1.231	-1.171	-1.089	-0.983		-0.787	-1.254	-1.111	-1.012	-1.012	-305		
2.25	-0.778	-1.271	-1.202	-1.172	-1.088	-0.979		-0.908	-1.287	-1.125	-1.091	-1.019	-a%		
4.00	-0.898	-1.232	-1.228	-1.173	-1.087	-0.969		-1.006	-1.279	-1.152	-1.091	-1.030	-896		
7.50	-0.863	-1.186	-1.203	-1.172	-1.078	-0.964		-0.974	1.263	-1.125	-1.092	-1.030	-895		
10.00	-0.863	-1.145	-1.203	-1.181	-1.080	-0.934		-0.942	-1.236	-1.146	-1.094	-1.039	-895		
15.00	-0.847	-851	-1.064	-1.079	-1.042	-0.964		-0.875	-1.138	-1.195	-1.070	-1.032	-890		
20.00	-0.847	-477	-1.025	-1.173	-1.051	-0.966		-0.608	-1.037	-1.146	-1.056	-1.047	-232		
30.00	-0.588	-515	-1.012	-1.094	-1.047	-0.963		-0.599	-1.096	-1.133	-1.042	-1.026	-877		
40.00	-0.546	-537	-0.998	-1.077	-1.033	-0.962		-0.615	-1.120	-1.127	-1.017	-1.012	-882		
50.00	-0.542	-548	-0.991	-1.063	-1.024	-0.957		-0.618	-1.110	-1.100	-1.004	-1.002	-879		
60.00	-0.572	-552	-0.924	-1.049	-1.011	-0.951		-0.618	-1.020	-1.048	-0.989	-1.000	-872		
80.00	-0.593	-587	-0.956	-1.030	-0.997	-0.942		-0.645	-1.042	-1.097	-0.974	-0.988	-873		
100.00	-0.609	-208	-0.904	-1.002	-0.977	-0.920		-0.665	-1.047	-0.953	-0.975	-0.969	-869		
120.00	-0.617	-611	-0.97	-0.988	-0.988	-0.922		-0.673	-1.032	-0.941	-0.973	-0.961	-861		
150.00	-0.604	-625	-0.98	-0.978	-0.940	-0.918		-0.641	-1.023	-0.930	-0.986	-0.962	-320		
200.00	-0.618	-635	-0.92	-0.939	-0.911	-0.918		-0.637	-1.011	-0.925	-0.985	-0.962	-862		
300.00	-0.611	-652	-0.92	-0.903	-0.918	-0.918		-0.624	-1.007	-0.917	-0.985	-0.965	-859		
400.00	-0.645	-649	-0.907	-0.973	-0.868	-0.921		-0.676	-1.017	-0.906	-0.981	-0.953	-859		
500.00	-0.626	-645	-0.82	-0.833	-0.926	-0.835		-0.635	-1.019	-0.891	-0.981	-0.953	-859		
800.00	-0.553	-532	-0.571	-0.765	-0.836	-0.924		-0.466	-1.057	-0.811	-0.984	-0.954	-859		
1100.00	1.001	.927	.848	.791	.738	.659		1.027	.959	.859	.791	.731	.658		
2.50	1.034	.875	.026	.783	.750	.640		1.082	.923	.855	.804	.771	.654		
S.00	.948	.808	.743	.726	.705	.619		.991	.850	.805	.766	.744	.644		
7.50	.848	.753	.678	.679	.623	.571		.903	.796	.758	.781	.777	.710		
10.00	.780	.673	.672	.643	.622	.524		.810	.751	.718	.689	.674	.570		
15.00	.684	.625	.603	.593	.570	.455		.741	.681	.651	.627	.620	.497		
20.00	.579	.570	.502	.474	.507	.375		.686	.629	.549	.558	.558	.346		
30.00	.525	.481	.460	.439	.472	.312		.586	.525	.525	.517	.517	.246		
40.00	.453	.442	.418	.397	.477	.221		.575	.540	.514	.489	.475	.297		
50.00	.433	.407	.386	.361	.34*	.154		.488	.453	.473	.444	.432	.27		
60.00	.411	.371	.250	.322	.310	.092		.483	.458	.439	.410	.402	.303		
80.00	.347	.322	.216	.293	.278	.060		.462	.422	.402	.371	.365	.140		
100.00	.303	.299	.227	.27	.278	.037		.398	.382	.367	.356	.328	.108		
200.00	.274	.251	.234	.160	.160	.021		.354	.351	.239	.312	.285	.078		
300.00	.216	.203	.174	.107	.107	.021		.302	.288	.278	.246	.214	.028		
400.00	.198	.207	.185	.159	.158	.042		.257	.242	.226	.201	.177	.009		
500.00	.171	.180	.165	.142	.107	.021		.209	.214	.205	.181	.148	.028		
800.00	.144	.155	.154	.130	.084	.037		.149	.150	.186	.161	.124	.013		
1100.00	.118	.110	.126	.109	.060	.084		.139	.180	.154	.134	.099	.058		
1100.00	.001	.007	.088	.052	.033	.073		.035	.103	.071	.035	.057			
	H = 1.00	$\alpha = 20.15^\circ$							H = 1.00	$\alpha = 22.28^\circ$					
Upper surface															
0.00	-1.21	-786	-1.980	-1.113	-1.091	-0.903		-2.11	-0.935	-1.112	-1.084	-0.988	-0.932		
2.25	-1.001	-1.683	-1.248	-1.080	-0.989	-0.880		-1.009	-1.284	-1.233	-1.062	-1.023	-0.915		
5.00	-1.066	-1.270	-1.214	-1.083	-0.993	-0.878		-1.102	-1.261	-1.214	-1.063	-1.046	-0.914		
7.50	-1.055	-1.257	-1.204	-1.081	-0.992	-0.875		-1.128	-1.261	-1.202	-1.056	-1.036	-0.914		
10.00	-1.019	-1.257	-1.238	-1.080	-0.995	-0.875		-1.097	-1.249	-1.217	-1.056	-1.037	-0.915		
15.00	-0.872	-1.222	-1.220	-1.073	-1.004	-0.875		-0.953	-1.241	-1.209	-1.021	-0.976	-0.916		
20.00	-0.657	-1.182	-1.194	-1.051	-0.995	-0.870		-0.755	-1.216	-1.193	-1.044	-0.976	-0.914		
30.00	-0.642	-1.877	-1.178	-1.044	-0.972	-0.868		-0.689	-1.148	-1.102	-0.982	-0.972	-0.914		
40.00	-0.635	-663	-1.031	-0.981	-0.981	-0.862		-0.673	-1.129	-1.027	-0.969	-0.913			
50.00	-0.652	-650	-1.146	-1.017	-0.979	-0.868		-0.656	-1.111	-1.039	-0.964	-0.913			
60.00	-0.626	-654	-1.083	-0.983	-0.967	-0.865		-0.647	-1.092	-1.093	-1.034	-0.964			
65.00	-0.635	-664	-1.082	-0.982	-0.966	-0.864		-0.639	-1.073	-1.073	-1.039	-0.955			
80.00	-0.643	-669	-1.046	-0.969	-0.960	-0.865		-0.628	-1.054	-1.031	-1.037	-0.957			
85.00	-0.670	-712	-0.907	-0.947	-0.942	-0.859		-0.600	-1.042	-1.024	-1.009	-0.952	-0.908		
100.00	-0.678	-678	-0.962	-0.944	-0.942	-0.859		-0.592	-1.029	-1.002	-1.002	-0.948	-0.914		
120.00	-0.675	-678	-0.931	-0.942	-0.929	-0.860		-0.702	-1.009	-1.002	-1.002	-0.948	-0.914		
150.00	-0.666	-677	-0.891	-0.931	-0.923	-0.861		-0.718	-0.979	-0.988	-0.964	-0.944	-0.911		
200.00	-0.685	-687	-0.849	-0.929	-0.916	-0.860		-0.786	-0.807	-0.968	-0.992	-0.942	-0.908		
230.00	-0.643	-697	-0.818	-0.929	-0.896	-0.858		-0.776	-0.800	-0.944	-0.991	-0.924	-0.910		
300.00	-0.625	-709	-0.780	-0.917	-0.877	-0.833		-0.745	-0.791	-0.918	-0.983	-0.808	-0.910		
350.00	-0.638	-707	-0.754	-0.901	-0.892	-0.832		-0.728	-0.778	-0.877	-0.923	-0.810	-0.910		
400.00	1.017	.971	.888	.806	.710	.45*		1.020	.973	.862	.747	.685	.629		
500.00	1.114	.943	.885	.822	.716	.455		1.119	.986	.896	.774	.745			
600.00	1.038	.900	.850	.801	.789	.458		1.045	.944	.879	.821	.787			
7.50	.954	.894	.802	.762	.732	.451		1.330	.893	.844	.829	.848			
10.00	.888	.814	.771	.732	.708	.460		.929	.858	.814	.764	.770			
15.00	.798	.742	.710	.623	.653	.532		.039	.790	.734	.714	.629	.561		
20.00	.729	.683	.657	.628	.609	.469		.773	.728	.701	.662	.645	.501		
25.00	.676	.642	.614	.587	.567	.408		.723	.688	.656	.619	.605	.444		
30.00	.633	.601	.571	.550	.529	.242		.678	.647	.587	.584	.569	.384		
35.00	.591	.577	.532	.51%	.483	.310		.603	.602	.572	.547	.532	.351		
40.00	.610	.477	.417	.401	.423	.188		.588	.588	.558	.504	.493	.251		
50.00	.610	.460	.425	.431	.425	.193		.500	.485	.455	.426	.416	.210		
60.00	.613	.409	.396	.369	.381	.161		.500	.485	.455	.426	.416	.194		
60.00	.404	.377	.360	.335	.296	.102		.457	.451	.432	.406	.374	.164		
65.00	.391	.342	.332	.302	.282	.076		.445	.416	.395	.370	.337	.124		
70.00	.307	.323	.307	.224	.251	.049		.345	.361	.342	.313	.298	.079		
75.00	.289	.285	.276	.259	.217	.032		.321	.319	.303	.281	.231	.060		
80.00	.254	.264	.249	.226	.189	.009		.293	.293	.279	.252	.226	.032		
85.00	.212	.237	.228	.206	.163	.028		.242	.266	.253	.227	.200	.042		
90.00	.179	.201	.194	.166	.133	.029		.198	.225	.209	.187	.158	.010		
95.00	.117	.141	.139	.106	.002	.032		.128	.159	.116	.100	.020			

TABLE L - STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER . Continued

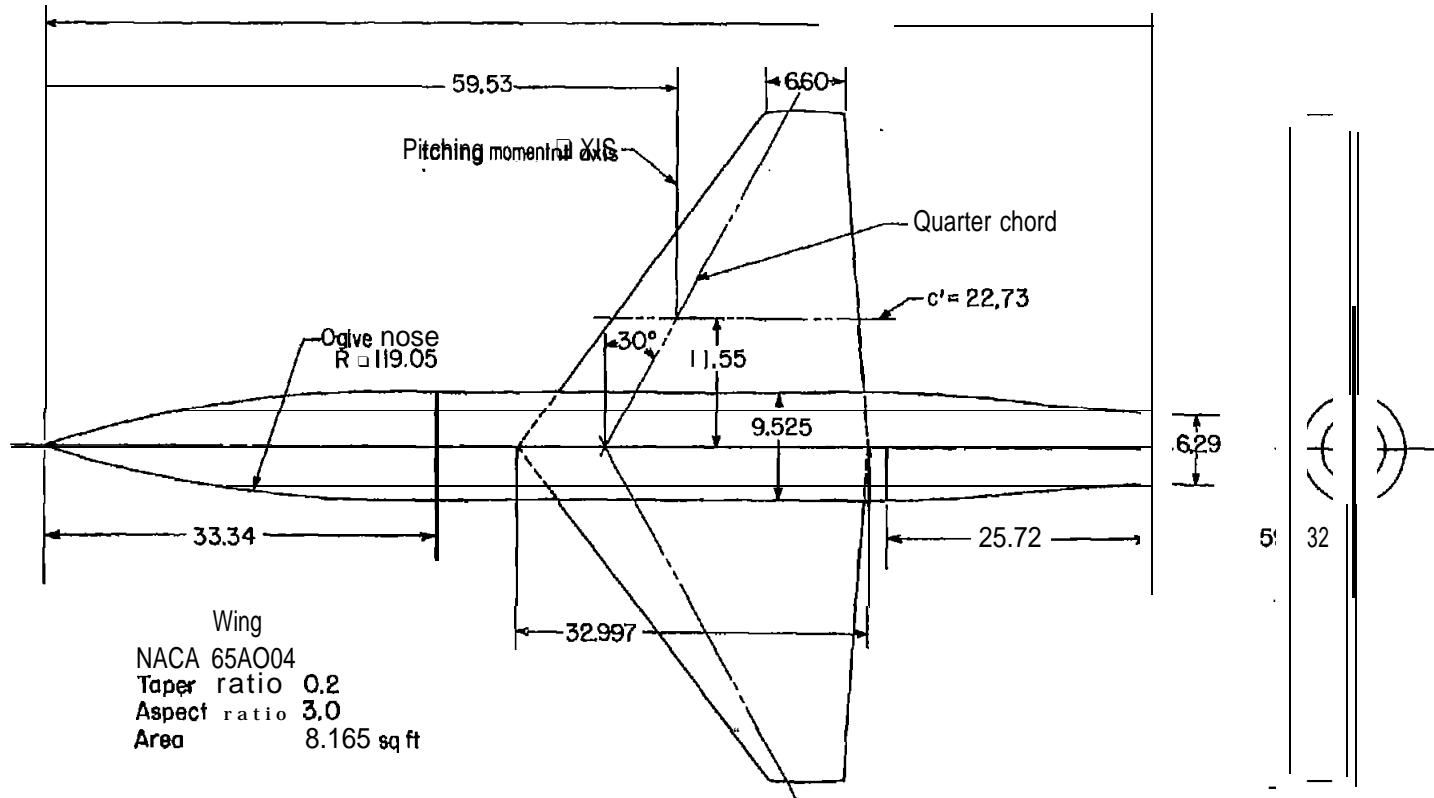
Pressure coefficient, P, at:													
		0.10b/2	0.25b/2	0.40b/2	0.60b/2	0.10b/a	0.95b/2	0.10b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2
Percent	C	M = 1.03	a = -2.02°					M = 1.03	a = -0.06°				
	Upper surface												
0.00		-0.019	.717	.674	.667	.616	.560	-.001	.758	.738	.725	.694	.739
1.00		.748	.243	.219	.203	.220	.357	.742	.685	.664	.647	.607	.647
2.00		.712	.160	.150	.204	.220	.357	.742	.685	.664	.647	.607	.647
5.00		.712	.160	.150	.204	.220	.357	.742	.685	.664	.647	.607	.647
7.50		.715	.120	.107	.103	.102	.159	.745	.688	.667	.650	.611	.653
10.00		.718	.098	.078	.077	.072	.112	.749	.690	.662	.646	.605	.659
15.00		.721	.068	.046	.045	.039	.044	.750	.690	.662	.646	.605	.678
20.00		.756	.027	.015	.013	.011	.023	.007	.027	.009	.005	.005	.100
25.00		.055	.027	.003	.007	.009	.122	.004	.042	.037	.005	.005	.114
30.00		.103	.011	.012	.025	.023	.153	.031	.051	.073	.100	.121	.201
40.00		.101	.022	.022	.036	.051	.176	.053	.076	.094	.116	.143	.201
45.00		.039	.033	.049	.063	.067	.239	.086	.098	.117	.146	.163	.231
50.00		.016	.033	.038	.080	.095	.239	.086	.109	.132	.158	.183	.239
55.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
60.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
65.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
70.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
75.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
80.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
85.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
90.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
95.00		.007	.033	.038	.080	.095	.239	.085	.107	.130	.157	.182	.239
	Surface												
1.25		.086	.180	.428	.587	.741	.787	.192	.067	.017	.008	.027	.080
2.50		.019	.154	.492	.618	.722	.731	.051	.002	.031	.060	.073	.073
5.00		.007	.093	.142	.189	.454	.646	.058	.013	.000	.014	.042	.082
7.50		.022	.101	.158	.205	.263	.593	.074	.007	.017	.038	.052	.097
10.00		.050	.111	.156	.223	.250	.940	.084	.101	.038	.056	.063	.096
15.00		.066	.102	.150	.210	.239	.419	.024	.009	.046	.043	.078	.109
20.00		.083	.112	.159	.234	.269	.319	.001	.040	.061	.096	.107	.139
30.00		.103	.116	.149	.198	.243	.359	.013	.050	.071	.101	.110	.184
35.00		.086	.115	.156	.216	.253	.312	.003	.047	.070	.101	.120	.201
40.00		.100	.111	.172	.224	.247	.318	.038	.067	.098	.146	.172	.241
45.00		.107	.117	.187	.224	.254	.324	.048	.084	.114	.149	.157	.241
50.00		.119	.121	.201	.254	.274	.329	.048	.104	.140	.170	.181	.241
55.00		.125	.127	.218	.275	.298	.341	.049	.113	.149	.182	.195	.243
60.00		.128	.128	.222	.281	.318	.301	.112	.131	.167	.196	.223	.27
65.00		.220	.226	.256	.295	.343	.319	.144	.161	.182	.212	.242	.283
70.00		.220	.224	.263	.303	.329	.330	.149	.169	.191	.236	.262	.284
75.00		.220	.224	.263	.303	.329	.330	.149	.169	.191	.236	.262	.284
80.00		.258	.252	.269	.309	.352	.337	.200	.200	.197	.237	.272	.289
85.00		.259	.260	.273	.316	.345	.328	.203	.203	.206	.246	.287	.289
90.00		.262	.263	.277	.297	.315	.315	.213	.203	.206	.237	.285	.291
95.00		.166	.220	.248	.277	.282	.282	.151	.206	.205	.223	.240	.223
	Lower surface												
0.00		M = 1.03	a = -1.96°					M = 1.03	a = 3.88°				
1.00		.008	.722	.645	.666	.654	.727	.025	.452	.540	.523	.514	.692
2.00		.119	.108	.236	.473	.553	.459	.036	.685	.777	.841	.877	.865
5.00		.058	.158	.184	.329	.476	.628	.032	.421	.692	.764	.804	.901
7.50		.026	.162	.188	.190	.321	.575	.142	.314	.607	.693	.750	.853
10.00		.025	.093	.130	.191	.241	.524	.14	.403	.529	.553	.709	.799
15.00		.040	.094	.136	.194	.234	.500	.113	.177	.279	.323	.461	.761
20.00		.047	.103	.135	.200	.250	.540	.104	.183	.242	.258	.644	.725
30.00		.124	.122	.156	.193	.222	.220	.215	.193	.233	.275	.344	.664
35.00		.121	.147	.173	.203	.245	.234	.105	.214	.244	.277	.314	.601
40.00		.154	.161	.198	.232	.261	.271	.219	.229	.266	.303	.322	.624
45.00		.164	.174	.209	.243	.279	.260	.229	.238	.278	.309	.357	.587
50.00		.158	IB	.219	.258	.300	.287	.201	.233	.268	.327	.359	.590
55.00		.158	.194	.228	.278	.320	.300	.214	.257	.297	.347	.380	.590
60.00		.158	.195	.228	.278	.320	.300	.216	.258	.298	.348	.381	.597
65.00		.201	.257	.252	.288	.340	.316	.216	.280	.316	.351	.391	.488
70.00		.211	.221	.252	.290	.341	.326	.227	.281	.316	.358	.409	.504
75.00		.215	.228	.257	.294	.342	.326	.227	.281	.320	.357	.413	.514
80.00		.249	.248	.257	.291	.336	.308	.228	.289	.316	.356	.414	.531
85.00		.264	.244	.257	.290	.309	.291	.214	.314	.334	.356	.383	.517
90.00		.261	.243	.248	.275	.277	.280	.213	.293	.305	.344	.383	.517
mew		.165	.233	.243	.254	.276	.289	.202	.275	.299	.319	.338	.538
	Lower surface												
1.25		.291	.261	.262	.291	.332	.285	.420	.439	.440	.478	.524	.495
2.50		.175	.195	.223	.240	.239	.207	.228	.239	.241	.394	.422	.500
5.00		.190	.193	.155	.171	.172	.167	.205	.206	.206	.321	.330	.372
7.50		.174	.177	.117	.124	.161	.143	.306	.207	.210	.224	.251	.222
10.00		.140	.072	.002	.098	.106	.110	.293	.184	.181	.187	.181	.145
15.00		.112	.074	.062	.058	.061	.052	.293	.184	.181	.187	.181	.145
20.00		.081	.042	.038	.018	.027	.019	.100	.183	.146	.133	.145	.085
25.00		.066	.045	.023	.004	.004	.004	.162	.147	.101	.078	.062	.062
30.00		.008	.010	.012	.026	.043	.102	.141	.153	.116	.102	.090	.082
35.00		.005	.018	.046	.081	.074	.025	.000	.009	.075	.054	.054	.092
40.00		.005	.018	.046	.081	.074	.025	.000	.009	.075	.054	.054	.092
45.00		.005	.018	.046	.081	.074	.025	.000	.009	.075	.054	.054	.092
50.00		.032	.033	.075	.110	.117	.227	.038	.019	.017	.034	.071	.23
55.00		.065	.075	.090	.122	.147	.277	.003	.003	.017	.034	.071	.239
60.00		.080	.097	.117	.143	.168	.279	.002	.022	.034	.058	.091	.235
65.00		.090	.108	.123	.163	.192	.278	.013	.031	.038	.072	.120	.266
70.00		.003	.097	.123	.121	.162	.217	.028	.032	.044	.071	.122	.274
75.00		.125	.122	.121	.162	.217	.246	.042	.052	.068	.092	.148	.271
80.00		.125	.135	.240	.171	.239	.269	.051	.058	.070	.100	.170	.279
85.00		.151	.134	.137	.165	.245	.249	.066	.068	.069	.102	.183	.228
90.00		.123	.134	.137	.165	.242	.291	.058	.068	.066	.102	.170	.217
95.00		.089	.1113	.125	.175	.223	.213	.049	.081	.086	.116	.172	.239

TABLE I.- STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Continued

Pressure coefficient, P_c , at											
Percent	0.15b/2	0.25b/2	0.40b/2	0.50b/2	0.75b/2	0.95b/2	0.15b/2	0.25b/2	0.40b/2	0.50b/2	0.75b/2 0.95b/2
	M = 1.03	a = 5.95*					M = 1.03	a = 7.92"			
0.00	-0.93	.495	.393	.342	.290	.601	-.059	.386	.236	.120	.031
1.25	-1.00	.948	.966	-1.098	-1.026	-.934	-1.338	-1.030	-1.023	-1.051	-1.073
2.50	-1.11	.873	.832	-.932	-.976	-1.049	-1.267	-.948	-1.234	-1.051	-1.134
5.00	-1.15	.675	.508	-.859	-.938	-.993	-1.367	-.952	-.977	-1.012	-1.079
7.50	-1.14	.552	.476	-.746	-.813	-.927	-1.352	-.819	-.871	-.933	-0.966
10.00	-1.15	.418	.316	-.710	-.791	-.833	-1.347	-.886	-.844	-.996	-0.942
15.00	-1.24	.314	.250	-.730	-.814	-.774	-1.333	-.838	-.777	-.925	-0.977
20.00	-1.22	.304	.296	-.697	-.782	-.851	-1.227	-.810	-.888	-.885	-0.933
25.00	-1.27	.303	.290	-.673	-.747	-.845	-1.263	-.800	-.801	-.799	-0.947
35.00	-1.30	.306	.287	-.453	-.720	-.799	-1.218	-.795	-.755	-.767	-0.925
40.00	-1.26	.324	.210	-.367	-.721	-.723	-1.216	-.716	-.742	-.734	-0.875
45.00	-1.31	.344	.210	-.347	-.714	-.744	-1.315	-.822	-.857	-.850	-0.915
50.00	-1.35	.347	.235	-.349	-.704	-.717	-1.307	-.848	-.820	-.809	-0.896
65.00	-1.23	.369	.251	-.361	-.713	-.713	-1.330	-.845	-.820	-.847	-0.913
60.00	-1.37	.394	.254	-.387	-.644	-.705	-1.346	-.861	-.840	-.805	-0.807
65.00	-1.31	.389	.352	-.399	-.444	-.714	-1.343	-.866	-.856	-.704	-0.811
70.00	-1.37	.385	.354	-.397	-.445	-.716	-1.345	-.864	-.853	-.623	-0.819
75.00	-1.37	.391	.361	-.397	-.445	-.716	-1.352	-.867	-.850	-.587	-0.823
80.00	-1.41	.402	.356	-.395	-.449	-.712	-1.366	-.875	-.851	-.566	-0.823
85.00	-1.41	.403	.353	-.395	-.435	-.701	-1.377	-.875	-.851	-.543	-0.815
90.00	-1.38	.340	.286	-.381	-.704	-.704	-1.355	-.875	-.845	-.493	-0.822
95.00	-1.27	.369	.334	-.367	-.324	-.710	-1.326	-.864	-.838	-.426	-0.833
1.26	.535	.562	.593	.619	.642	.555	.705	.714	.627	.693	.703
2.50	.451	.511	.532	.545	.490	.490	.696	.614	.513	.618	.549
5.00	.472	.583	.435	.433	.433	.433	.638	.533	.520	.525	.532
7.50	.413	.327	.377	.324	.395	.363	.575	.476	.471	.468	.475
10.00	.361	.292	.345	.347	.345	.316	.511	.402	.434	.426	.421
15.00	.300	.249	.294	.297	.286	.225	.441	.351	.373	.368	.359
20.00	.250	.229	.249	.236	.240	.145	.383	.360	.325	.306	.204
25.00	.216	.187	.233	.208	.203	.070	.352	.313	.291	.270	.141
30.00	.185	.152	.193	.120	.172	.010	.227	.218	.199	.242	.174
35.00	.129	.124	.135	.114	.110	.010	.243	.251	.199	.172	.115
40.00	.129	.095	.109	.074	.100	-.046	.225	.196	.126	.134	.075
45.00	.124	.072	.106	.057	.074	-.124	.170	.149	.135	.109	.105
50.00	.024	.097	.000	.057	.044	-.153	.136	.127	.118	.091	.041
55.00	.021	.012	.043	.043	.004	-.182	.136	.106	.091	.041	.136
60.00	.025	.006	.041	.018	.022	-.197	.118	.106	.091	.066	.028
65.00	-.004	.023	.026	.002	.051	-.215	.106	.085	.078	.043	.003
70.00	-.025	.027	.021	.002	.056	-.230	.075	.064	.052	.009	.190
75.00	-.039	.056	-.004	-.034	-.089	-.228	.065	.052	.081	.004	-.042
80.00	-.054	.063	-.013	-.050	-.109	-.238	.048	.051	.031	-.004	-.056
85.00	-.063	.061	-.013	-.050	-.120	-.192	.028	.030	.031	-.004	-.068
90.00	-.082	.073	-.013	-.048	-.120	-.138	.023	.035	.032	-.021	-.212
95.00	-.086	.081	-.013	-.062	-.111	-.210	.024	.017	.018	-.022	-.097
	M = 1.03	a = 9.99"					M = 1.03	a = 13.68"			
0.00	-.091	.206	.044	.108	-.210	.239	-4121	-.159	.406	-.598	.760
2.50	-.260	-1.136	-1.163	-1.15	-1.183	-1.074	-483	-1.133	-1.087	-1.046	-1.065
5.00	-.358	-1.058	-1.084	-1.130	-1.155	-1.190	-599	-1.092	-1.073	-1.032	-1.120
7.50	-.513	-.888	-1.036	-1.072	-1.109	-1.161	-721	-1.053	-1.098	-1.048	-1.114
10.00	-.496	-.676	-.974	-.1083	-.1058	-.1120	-680	-.99	-.944	-.940	-.103
15.00	-.479	.616	.818	.808	.810	.1032	-610	-.931	-.1021	-.1038	-.1004
20.00	-.357	.489	.703	.811	.1022	.0405	-516	-.902	-.1028	-.1038	-.1031
25.00	-.302	.426	.572	.806	.943	.1028	-421	-.865	-.907	-.924	-.1020
30.00	-.327	.387	.512	.827	.929	.1001	-415	-.857	-.860	-.958	-.1022
35.00	-.233	.371	.478	.857	.921	.922	-412	-.835	-.828	-.922	-.1022
40.00	-.364	.371	.430	.808	.912	.924	-427	-.842	-.874	-.882	-.1022
45.00	-.369	.371	.414	.663	.912	.899	-435	-.845	-.774	-.868	-.1021
50.00	-.355	.373	.419	.626	.909	.909	-444	-.847	-.748	-.858	-.1018
55.00	-.366	.371	.431	.620	.909	.902	-456	-.845	-.713	-.846	-.1014
60.00	-.403	.419	.402	.603	.910	.903	-453	-.849	-.692	-.827	-.1011
65.00	-.407	.417	.440	.590	.887	.903	-458	-.850	-.641	-.812	-.1008
70.00	-.407	.418	.445	.577	.861	.914	-459	-.852	-.602	-.805	-.1005
75.00	-.407	.417	.445	.577	.861	.914	-459	-.852	-.592	-.805	-.1005
80.00	-.424	.437	.454	.540	.644	.922	-521	-.835	-.500	-.793	-.1014
85.00	-.424	.438	.454	.527	.589	.932	-520	-.830	-.505	-.777	-.1016
90.00	-.424	.438	.443	.505	.507	.927	-518	-.830	-.657	-.618	-.1017
95.00	-.426	.443	.443	.472	.467	.946	-543	-.849	-.510	-.548	-.1017
1.25	.205	.203	.757	.749	.741	.646	.958	.914	.844	.802	.771
5.00	.803	.716	.871	.689	.678	.595	.909	.820	.735	.700	.658
7.50	.683	.622	.594	.594	.594	.541	.912	.817	.735	.700	.615
10.00	.598	.592	.551	.500	.499	.497	.914	.704	.647	.614	.520
15.00	.516	.453	.448	.438	.427	.395	.857	.595	.556	.561	.378
20.00	.449	.429	.394	.376	.373	.360	.886	.597	.515	.492	.483
25.00	.410	.378	.359	.340	.335	.333	.858	.501	.475	.452	.403
30.00	.376	.338	.323	.300	.297	.123	.496	.455	.435	.417	.324
35.00	.281	.267	.287	.268	.252	.113	.403	.416	.397	.378	.220
40.00	.292	.272	.258	.257	.227	.037	.409	.336	.365	.345	.331
45.00	.284	.241	.222	.193	.187	-.024	.393	.333	.360	.309	.078
50.00	.238	.203	.193	.170	.118	-.037	.367	.310	.352	.252	.025
55.00	.176	.178	.173	.151	.113	-.024	.361	.279	.340	.240	.024
60.00	.185	.126	.122	.109	.094	-.103	.361	.247	.317	.211	.004
65.00	.143	.124	.122	.099	.024	-.141	.350	.237	.331	.149	.004
70.00	.102	.096	.090	.062	.014	-.149	.194	.18	.180	.157	.027
75.00	.003	.085	.020	.055	.001	-.167	.173	.172	.166	.146	.069
80.00	.062	.078	.080	.054	-.005	-.125	.140	.158	.155	.134	.084
85.00	.034	.066	.068	.034	-.012	-.137	.029	.097	.104	.075	.075
90.00	.041	.044	.049	.022	-.012	-.137	.029	.097	.104	.075	.065

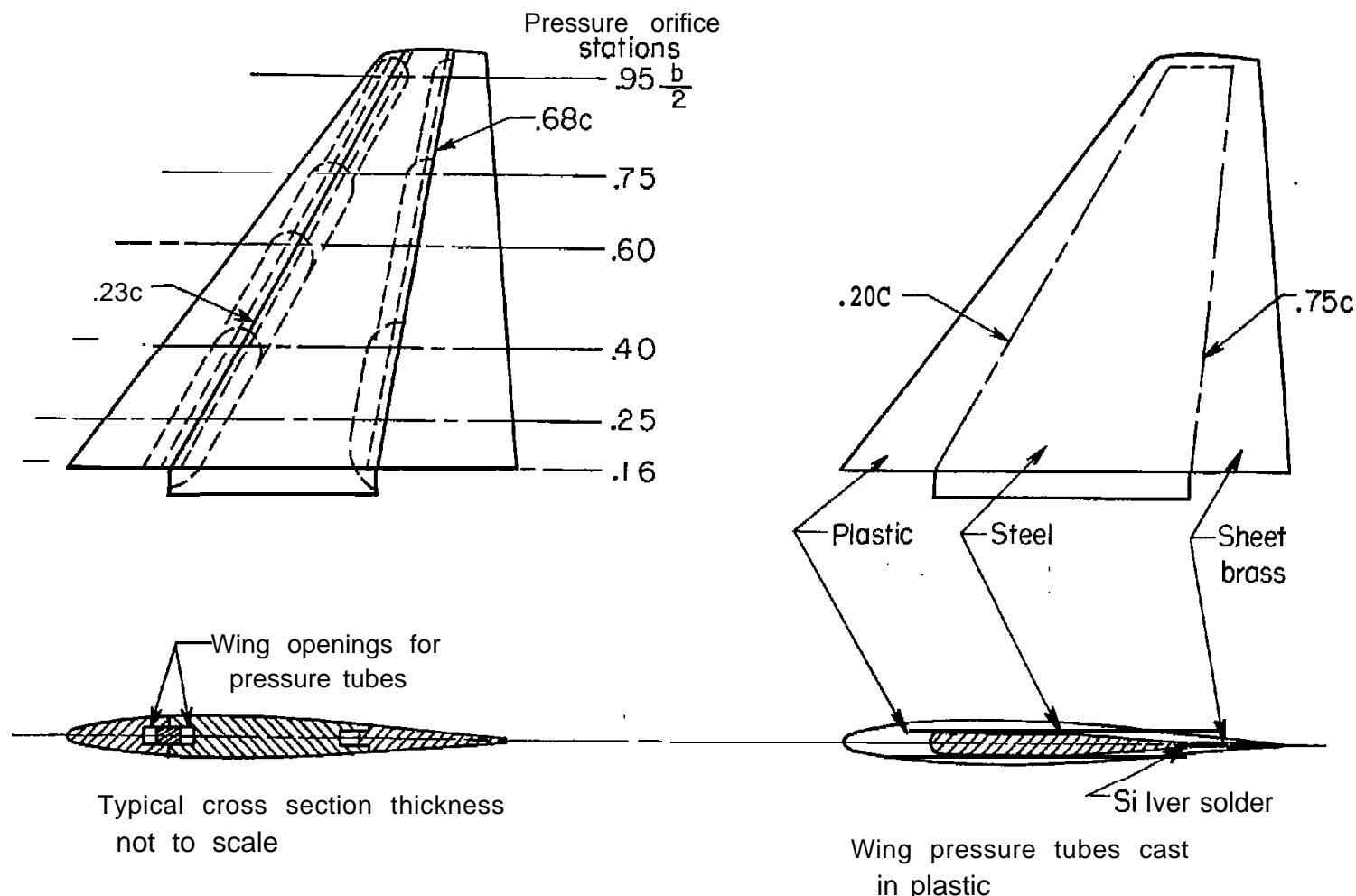
TABLE I. STEEL WING PRESSURE COEFFICIENT DATA FOR THE TEST
RANGE OF ANGLE OF ATTACK AND MACH NUMBER - Concluded

		Pressure coefficient, P, • t												
		0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.16b/2	0.05b/2	0.16b/2	0.25b/2	0.40b/2	0.60b/2	0.75b/2	0.95b/2	
Percent		M = 1.03						M = 1.09						
		α = 15.85°						α = 17.97°						
Upper surface		.000	-.152	-.378	-.588	-.618	.922	-.599	-.172	-.550	-.765	-.75%	-.062	-.030
Lower surface		1.25	-.604	-1.108	-1.129	-1.072	-1.003	-.918	-.093	-.129	-1.193	-1.047	-.973	-.040
Lower surface		2.50	-.713	-1.179	-1.108	-1.076	-1.003	-.969	-.093	-.123	-1.166	-1.042	-.973	-.040
Upper surface		5.00	-.827	-1.144	-1.132	-1.068	-1.002	-.901	-.093	-.123	-1.196	-1.037	-.979	-.061
Upper surface		7.50	-.794	-1.107	-1.107	-2.072	-1.068	-.990	-.093	-.120	-1.162	-1.036	-.977	-.061
Upper surface		10.00	-.761	-1.064	-1.103	-1.080	-1.003	-.985	-.094	-.120	-1.170	-1.039	-.977	-.060
Upper surface		15.00	-.602	-1.016	-1.066	-1.073	-1.003	-.954	-.093	-.115	-1.158	-1.026	-.1002	-.059
Upper surface		20.00	-.517	-0.971	-1.025	-1.049	-1.004	-.990	-.094	-.108	-1.125	-1.018	-.1007	-.056
Upper surface		25.00	-.479	-0.743	-0.984	-1.049	-1.004	-.981	-.091	-.102	-1.098	-1.015	-.1004	-.053
Upper surface		30.00	-.506	-0.419	-0.936	-1.022	-1.002	-.976	-.089	-.095	-0.974	-1.003	-.994	-.051
Upper surface		35.00	-.576	-0.478	-0.936	-1.022	-1.002	-.976	-.089	-.095	-0.974	-1.003	-.994	-.050
Upper surface		40.00	-.446	-0.478	-0.929	-0.992	-0.960	-.880	-.089	-.054	-1.048	-.993	-.977	-.049
Upper surface		45.00	-.000	-.493	-0.920	-0.977	-0.912	-.879	-.089	-.053	-1.039	-.965	-.971	-.046
Upper surface		50.00	-.513	-0.503	-0.209	-0.966	-0.940	-.872	-.089	-.054	-1.035	-.950	-.959	-.041
Upper surface		55.00	-.528	-0.527	-0.883	-0.953	-0.926	-.864	-.089	-.054	-1.025	-.934	-.948	-.037
Upper surface		60.00	-.531	-0.532	-0.810	-0.927	-0.914	-.858	-.089	-.054	-1.012	-.935	-.944	-.035
Upper surface		65.00	-.533	-0.561	-0.721	-0.910	-0.896	-.847	-.089	-.054	-1.012	-.930	-.934	-.035
Upper surface		70.00	-.533	-0.546	-0.220	-0.894	-0.872	-.672	-.089	-.054	-0.624	-0.702	-.886	-.028
Upper surface		75.00	-.542	-0.573	-0.517	-0.873	-0.855	-.843	-.089	-.054	-0.622	-0.509	-.886	-.028
Upper surface		80.00	-.587	-0.585	-0.513	-0.844	-0.839	-.843	-.089	-.054	-0.625	-0.443	-.855	-.025
Upper surface		85.00	-.593	-0.505	-0.326	-0.812	-0.804	-.845	-.089	-.054	-0.611	-0.517	-.847	-.024
Upper surface		90.00	-.579	-0.587	-0.512	-0.754	-0.772	-.852	-.089	-.054	-0.618	-0.549	-.827	-.022
Upper surface		95.00	-.207	-0.507	-0.318	-0.696	-0.773	-.831	-.089	-.054	-0.431	-0.484	-.800	-.020
Lower surface		1.85	1.013	.950	.876	.622	.769	.688	1.047	.974	.882	.818	.755	.402
Lower surface		5.00	1.048	.908	.855	.825	.781	.674	1.103	.943	.832	.838	.792	.478
Lower surface		5.00	.967	.930	.795	.761	.741	.650	1.019	.865	.832	.798	.768	.470
Lower surface		7.60	.077	.767	.742	.713	.698	.609	.928	.823	.785	.754	.733	.435
Lower surface		10.00	.204	.727	.706	.677	.655	.566	.861	.770	.746	.718	.659	.396
Lower surface		15.00	.720	.660	.638	.613	.599	.487	.712	.710	.685	.657	.634	.325
Lower surface		20.00	.645	.645	.581	.596	.543	.418	.711	.600	.627	.599	.584	.256
Lower surface		25.00	.559	.539	.537	.500	.455	.447	.517	.517	.517	.513	.511	.196
Lower surface		30.00	.557	.514	.537	.480	.463	.292	.404	.367	.543	.525	.501	.229
Lower surface		35.00	.462	.475	.437	.437	.417	.259	.515	.526	.503	.481	.459	.299
Lower surface		40.00	.463	.444	.425	.402	.388	.199	.4515	.4483	.4469	.4443	.4279	.236
Lower surface		45.00	.448	.404	.390	.363	.352	.132	.474	.4555	.434	.407	.393	.176
Lower surface		50.00	.380	.366	.354	.330	.312	.102	.431	.4112	.398	.374	.358	.142
Lower surface		55.00	.342	.334	.331	.308	.279	.074	.368	.362	.370	.352	.314	.114
Lower surface		60.00	.339	.307	.297	.279	.242	.047	.382	.352	.337	.320	.277	.089
Lower surface		65.00	.279	.260	.278	.247	.209	.022	.339	.319	.313	.284	.245	.062
Lower surface		70.00	.220	.264	.255	.210	.170	.009	.207	.306	.21	.271	.236	.037
Lower surface		75.00	.177	.232	.212	.170	.130	.002	.211	.269	.24	.242	.204	.025
Lower surface		80.00	.100	.214	.210	.191	.153	.022	.207	.229	.221	.205	.156	.023
Lower surface		85.00	.179	.197	.197	.179	.133	.004	.207	.229	.225	.205	.156	.023
Lower surface		90.00	.151	.173	.170	.156	.115	-.041	.178	.199	.191	.178	.134	-.021
Lower surface		95.00	.110	1	2	6	.135	.10	.05	.081	.032	.125	.150	.092



(a) Complete model.

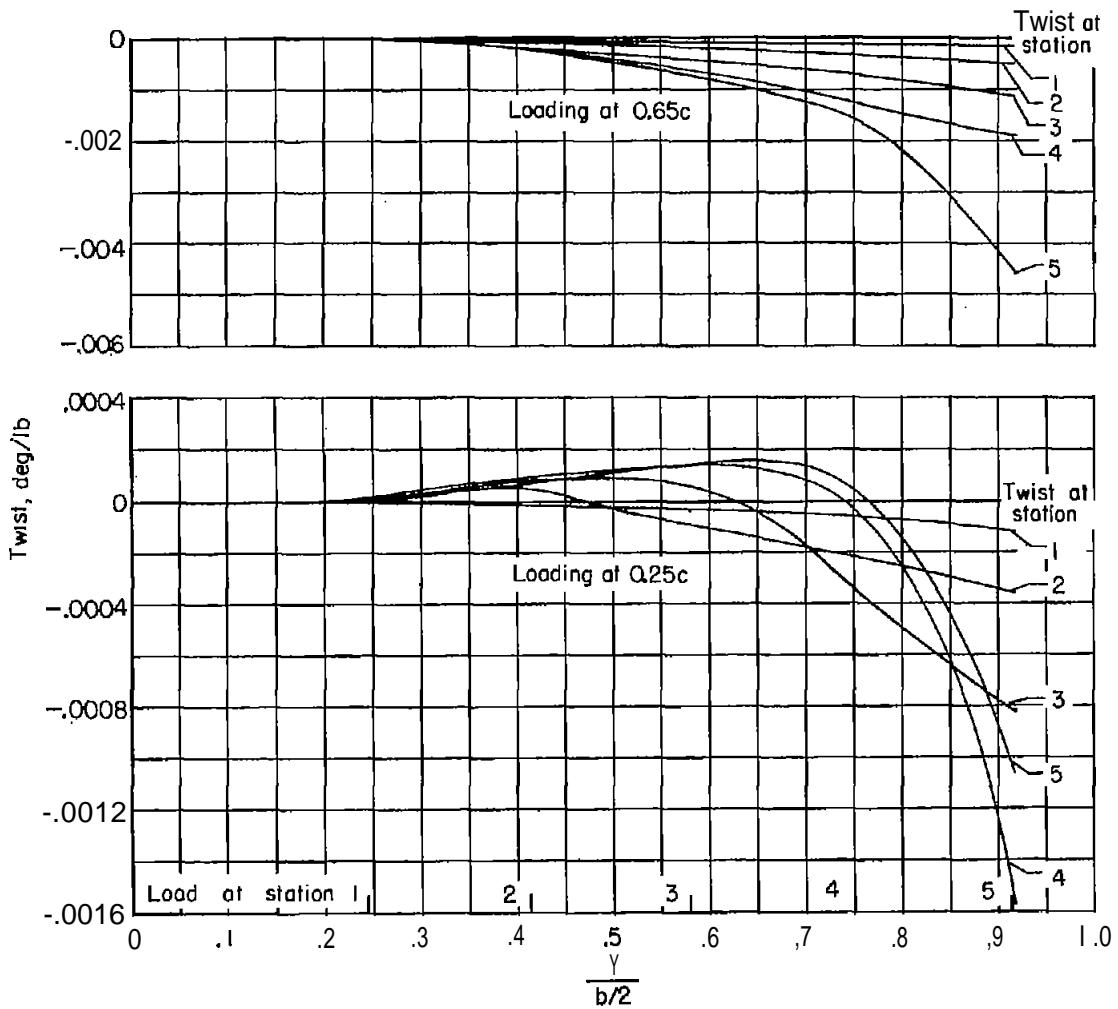
Figure 1.- General model arrangement. All dimensions in inches.



(b) Wings .

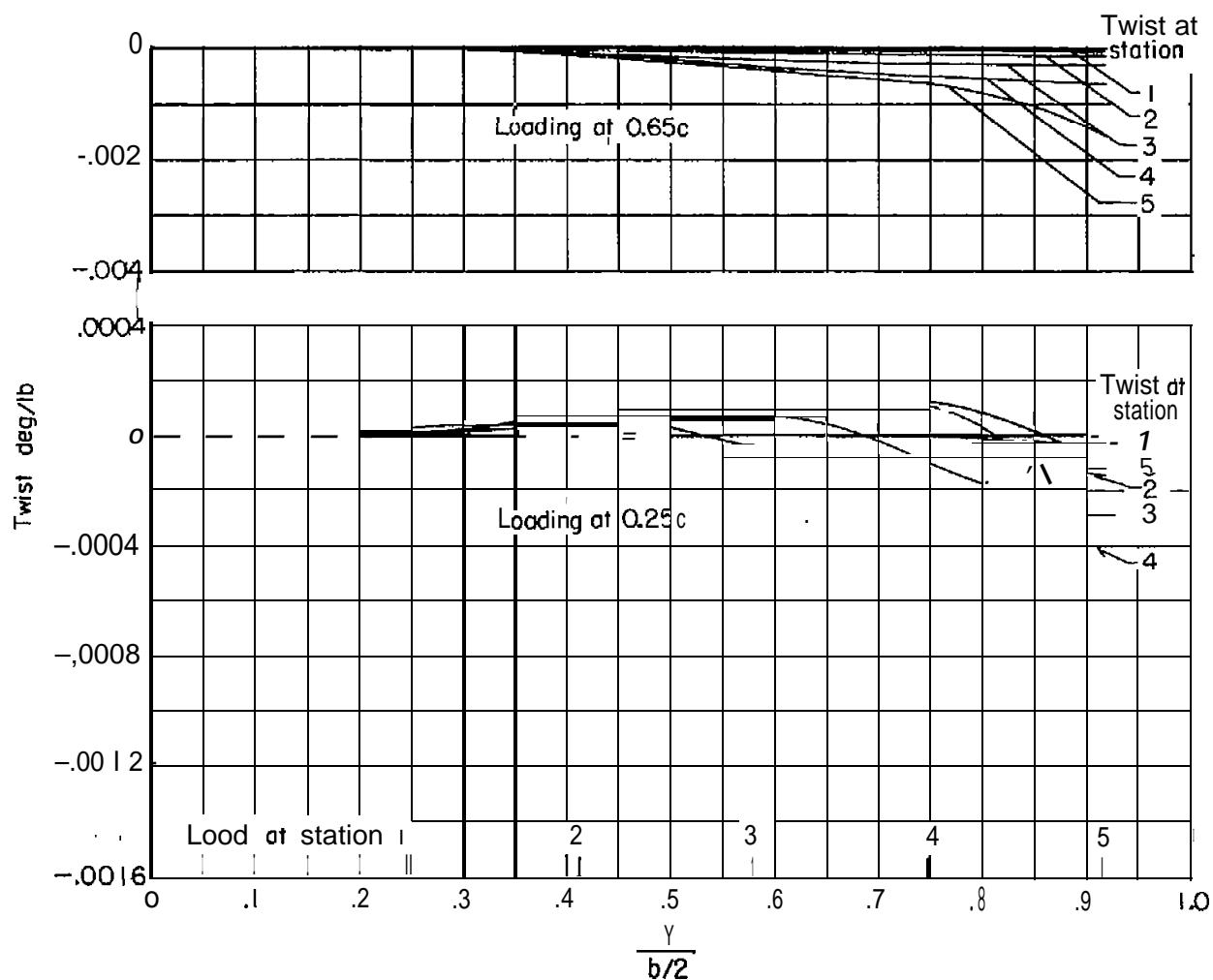
Figure 1.- Concluded.

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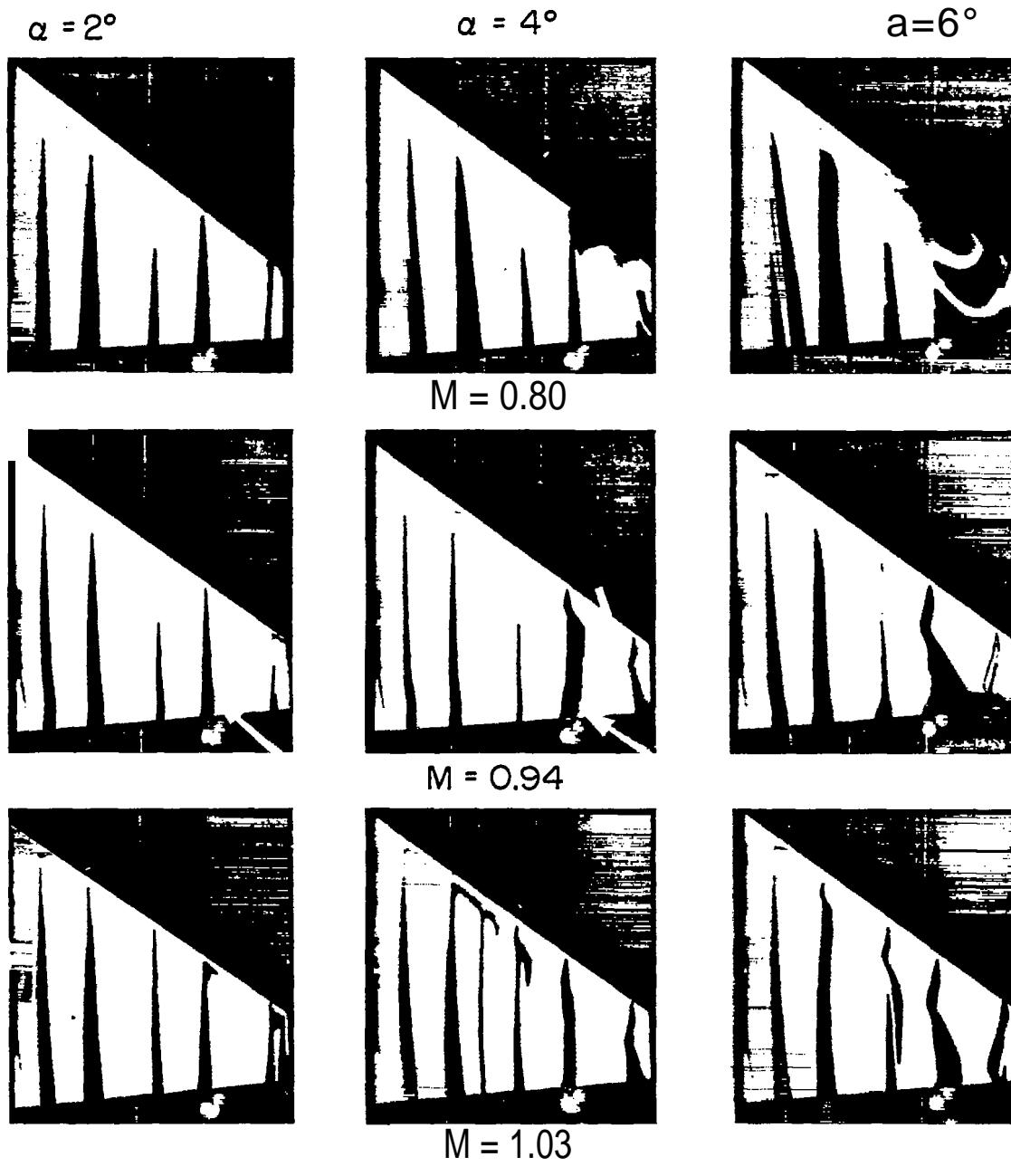
(a) Plastic wing.

Figure 2.. Wing elastic characteristics obtained experimentally, from which the influence coefficients were determined for twist in the angle-of-attack plane about 0.25c.



(b) Steel wing.

Figure 2.- Concluded.

(a) $\alpha = 20$ to 6° .

L-57-1639

Figure 3.- Typical flow study photographs for a range of Mach number and angle of attack, plastic wing.

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 $\alpha = 8^\circ$  $\alpha = 10^\circ$  $\alpha = 13^\circ$  $M = 0.80$  $M = 0.94$  $M = 1.03$ (b) $\alpha = 8^\circ$ to 13° .

L-57-1640

Figure 3.- Continued.

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~~CONFIDENTIAL~~ $\alpha = 17^\circ$  $\alpha = 19^\circ$  $M = 0.80$  $\alpha = 15^\circ$  $M = 0.94$ $\alpha = 15^\circ$  $M = 1.03$ (c) $\alpha = 15^\circ$ to 19° .

L-57 -1641

Figure 3.- Concluded.

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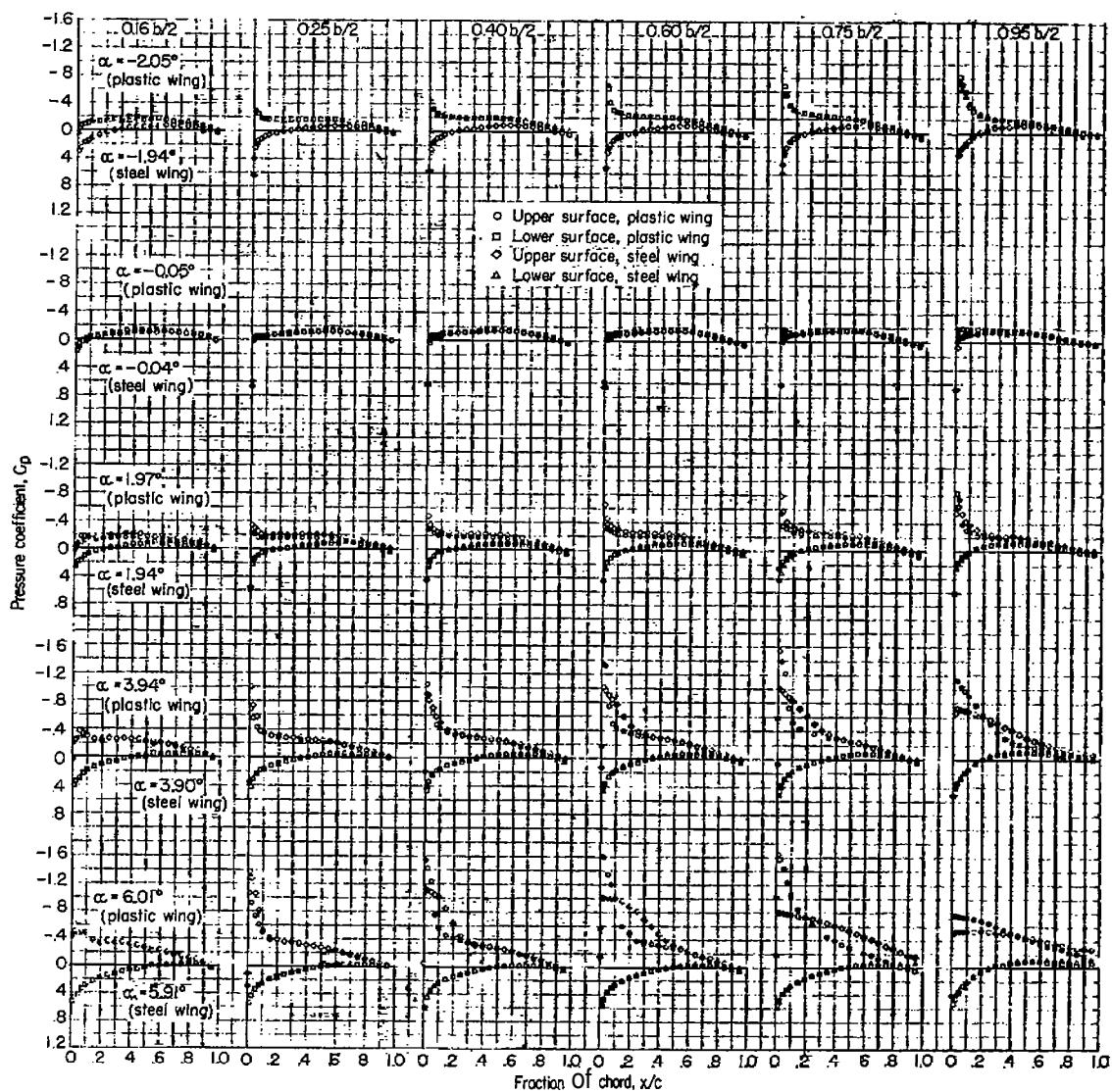
(a) $M = 0.80$.

Figure 4.- Comparison of chordwise pressure distributions for steel and plastic wings.

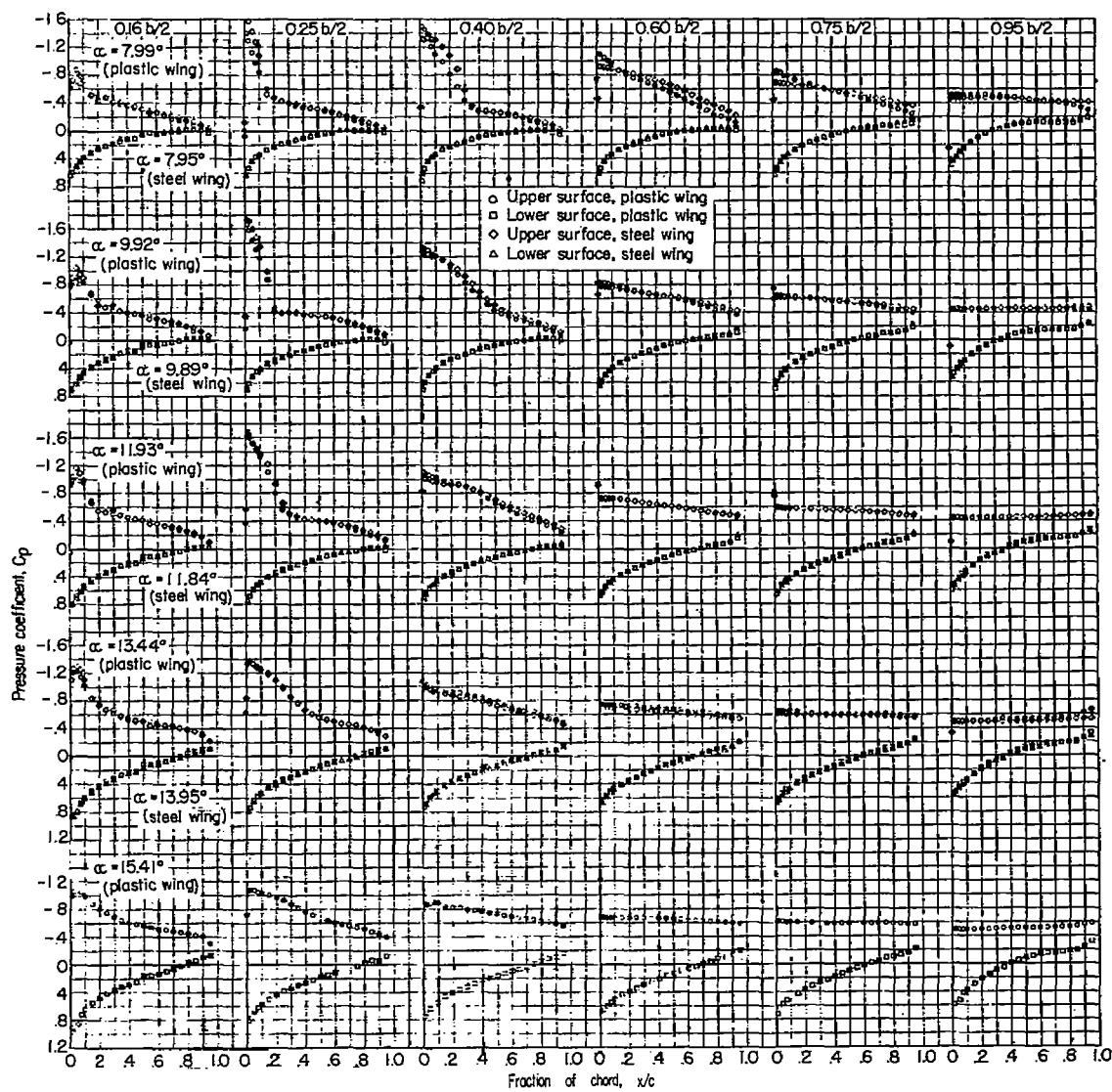
(a) $M = 0.80$, continued.

Figure 4.- Continued.

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NACA RM L57G09a

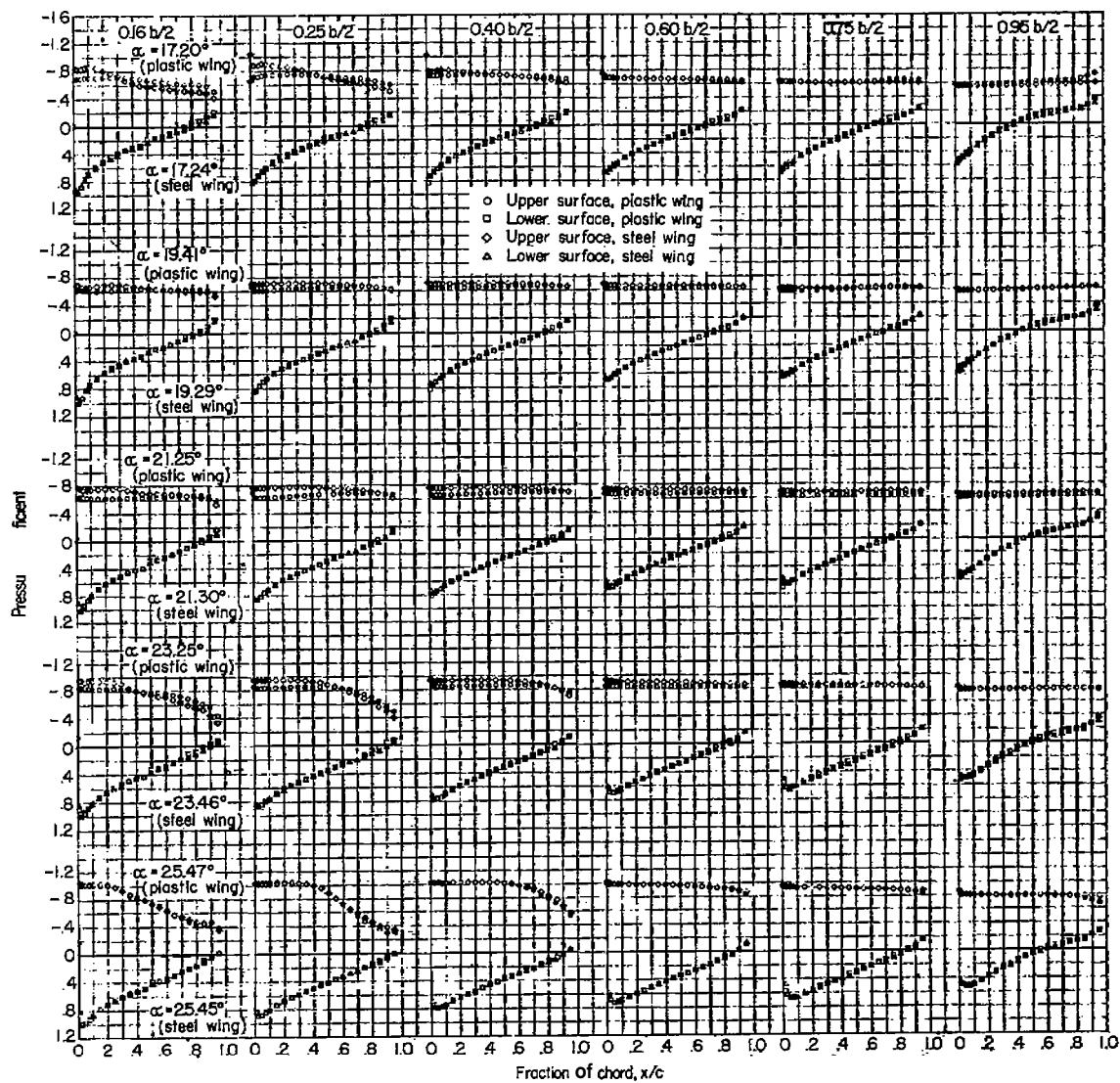
(a) $M = 0.80$, concluded.

Figure 4.- Continued.

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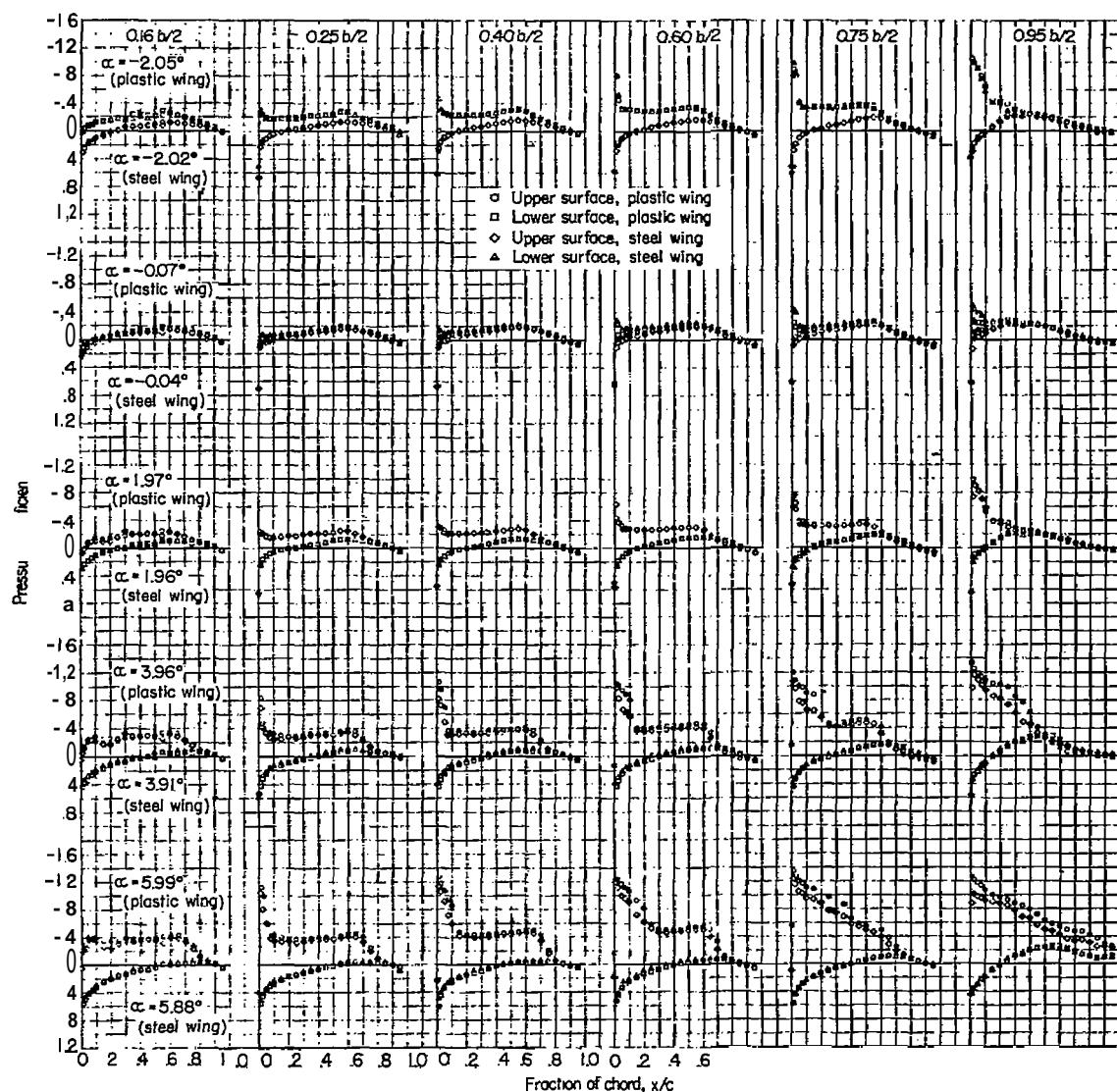
(b) $M = 0.90$.

Figure 4.- Cent inued.

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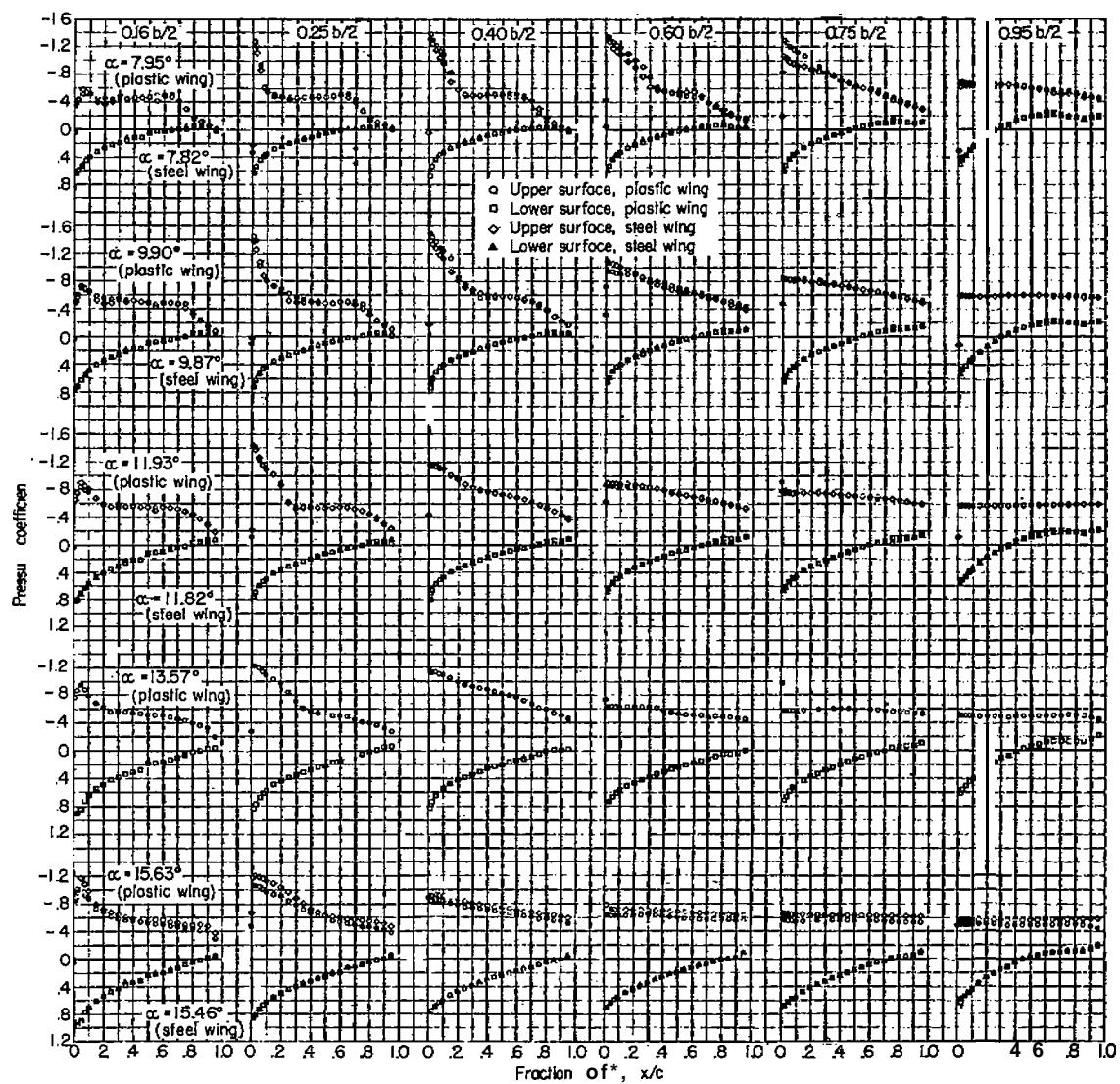
(b) $M = 0.90$, continued.

Figure 4.- Continued.

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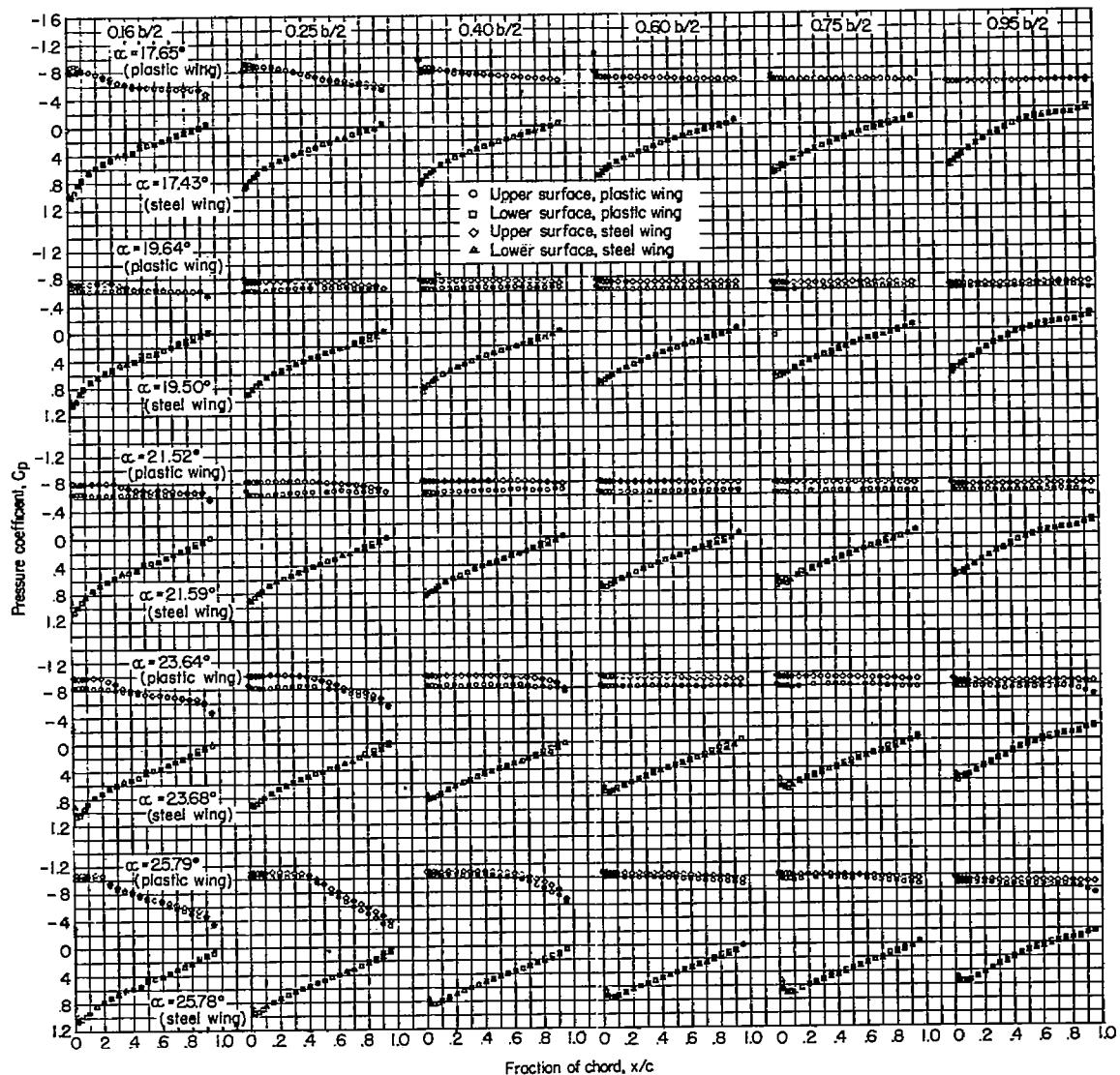
(b) $M = 0.90$, concluded.

Figure 4 .- Continued.

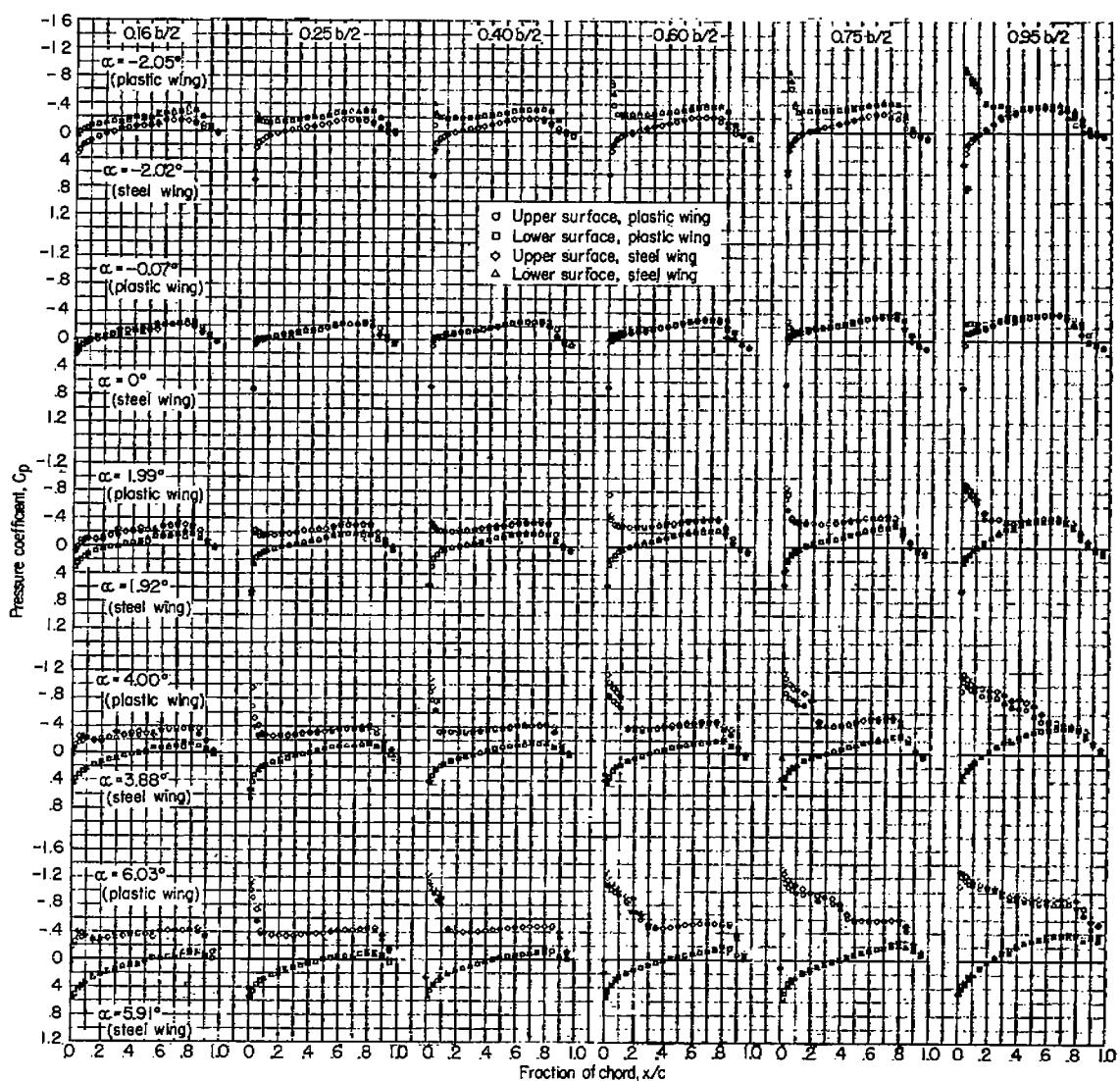
(c) $M = 0.94$.

Figure 4.- Continued.

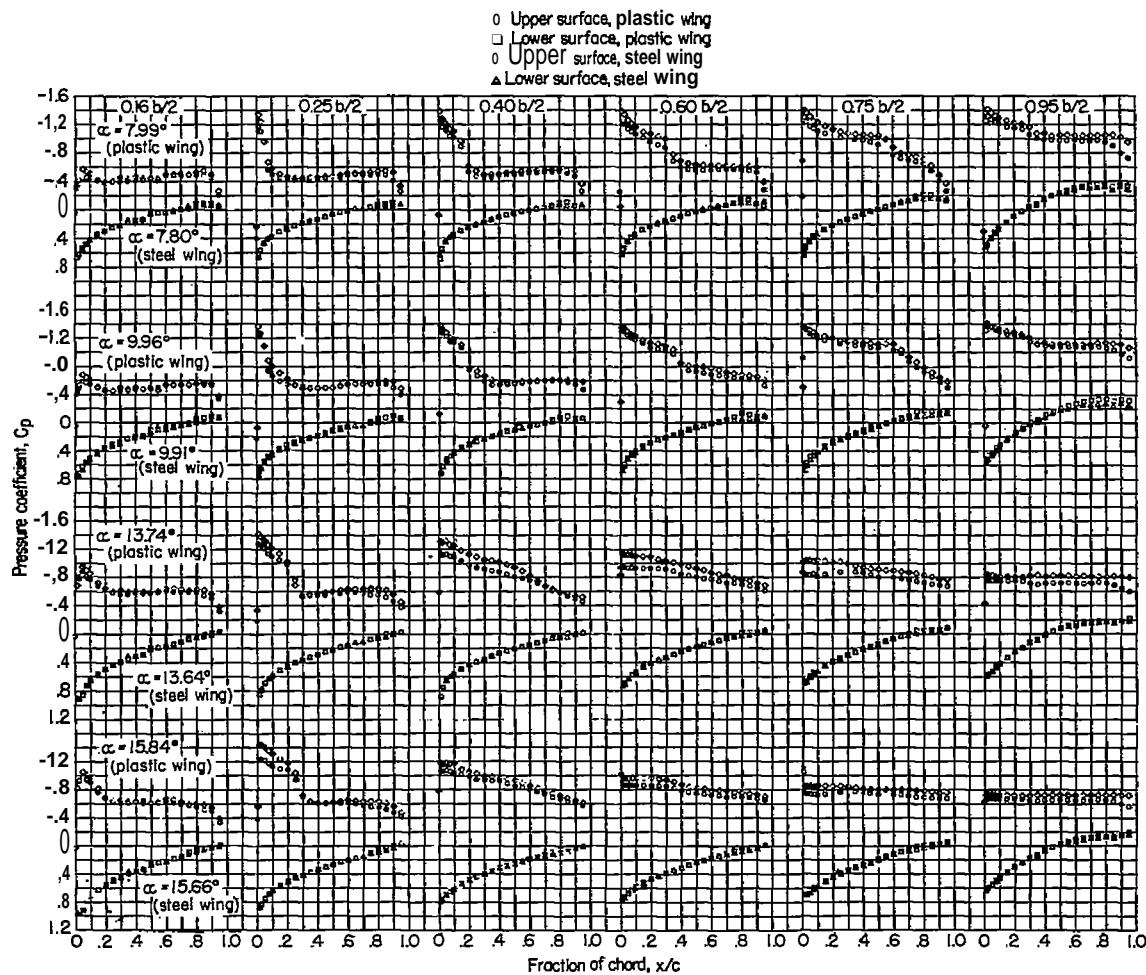
(c) $M = 0.94$, continued.

Figure 4.- Continued.

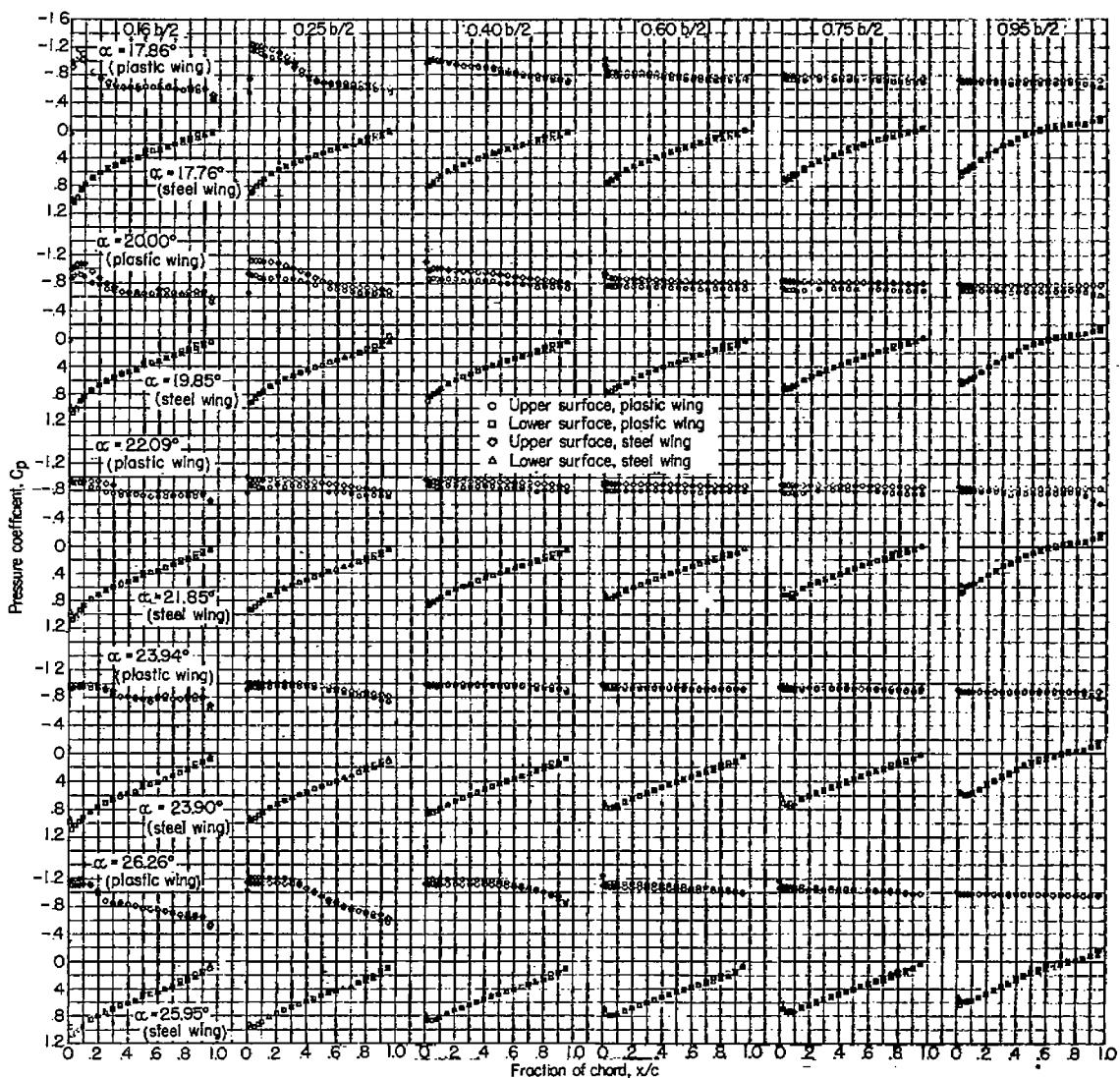
(c) $M = 0.94$, concluded.

Figure 4.- Continued.

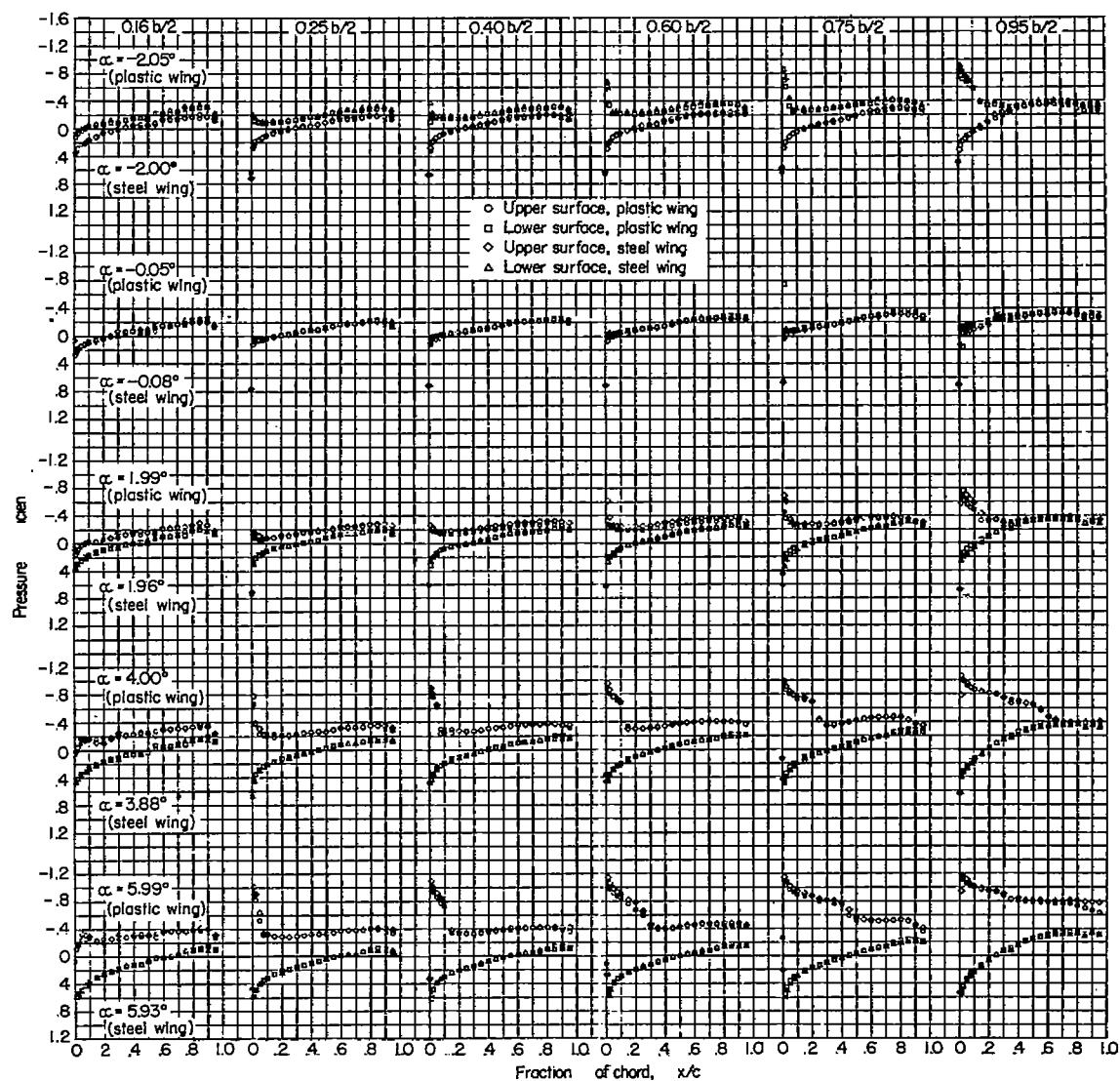
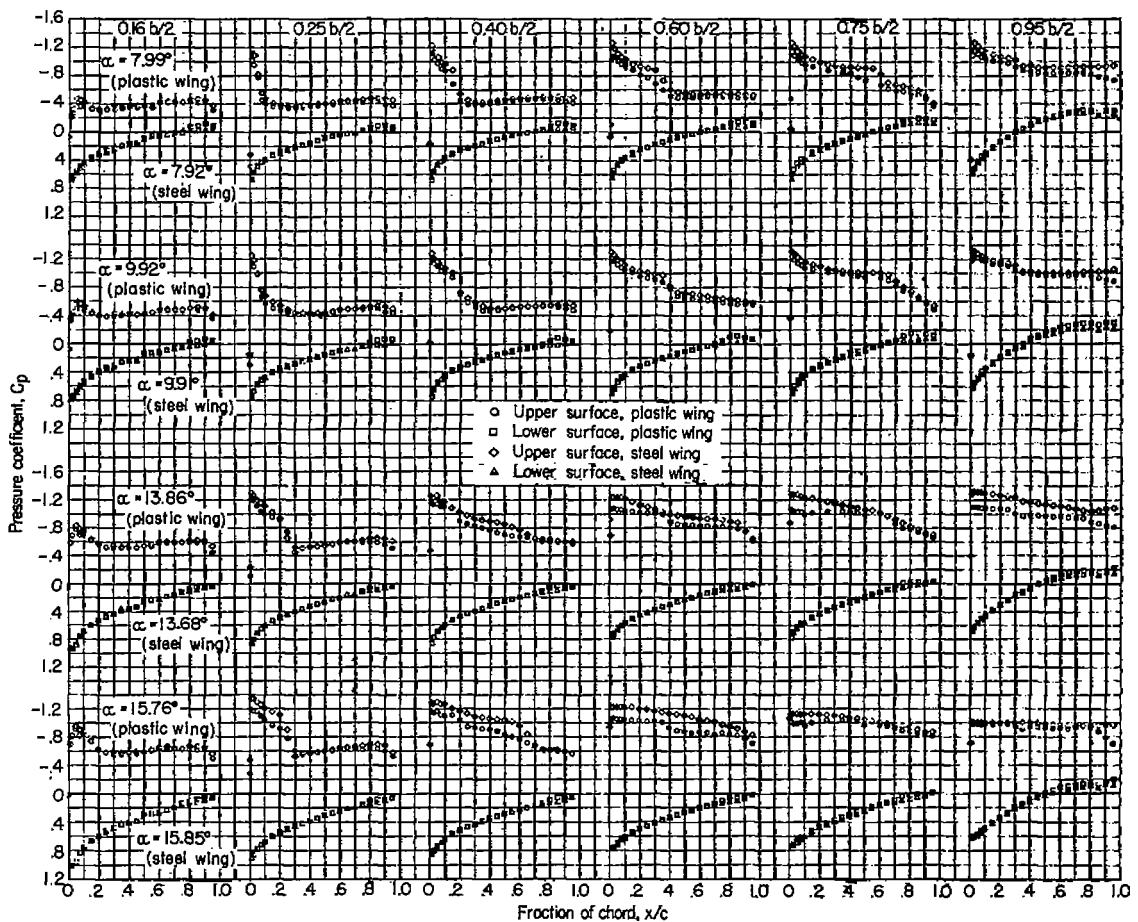
(d) $M = 0.98$.

Figure 4.- Continued.



(d) $M = 0.98$, cent inued.

Figure 4.- Continued.

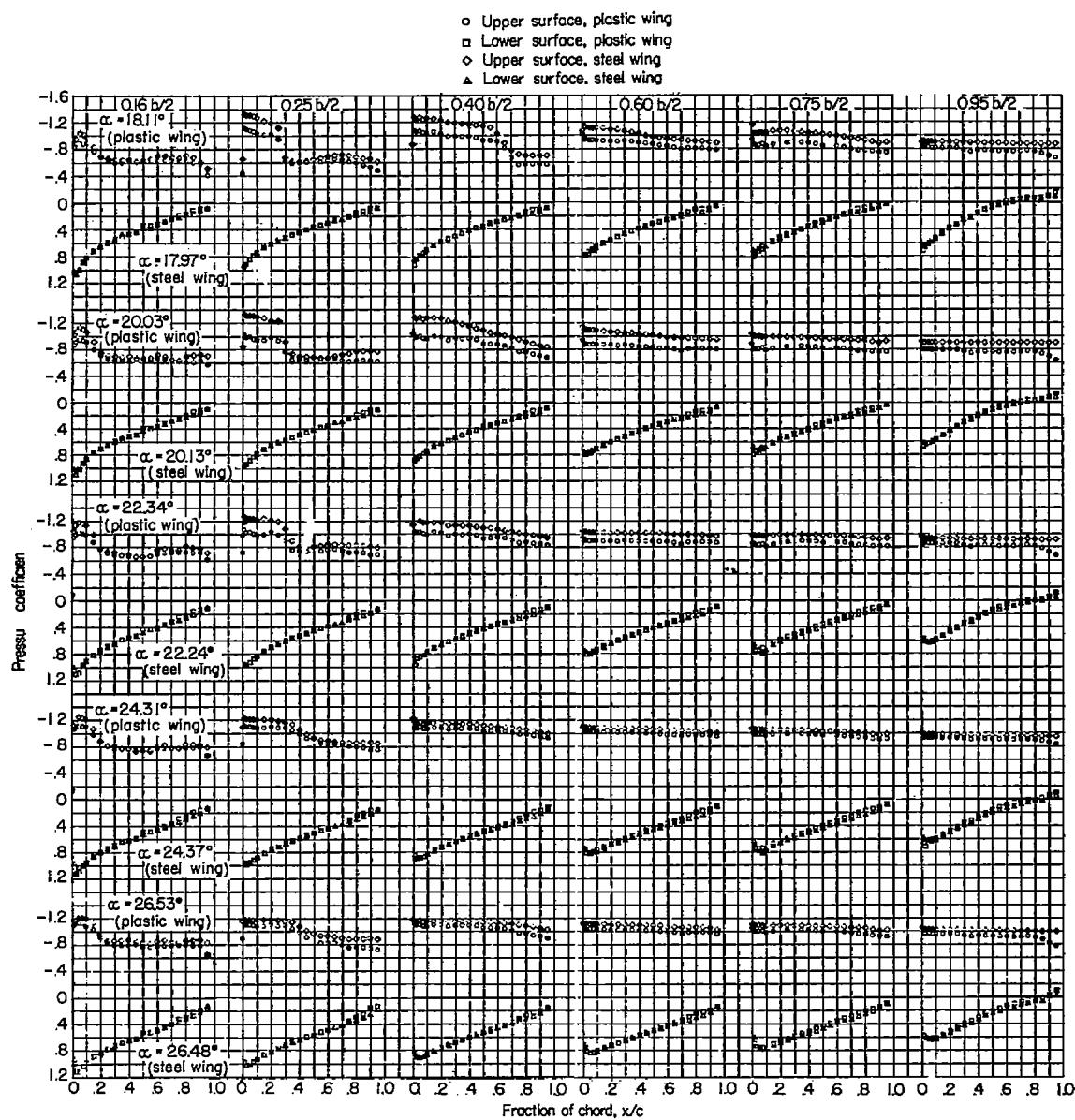
(d) $M = 0.98$, concluded.

Figure 4.- Continued.

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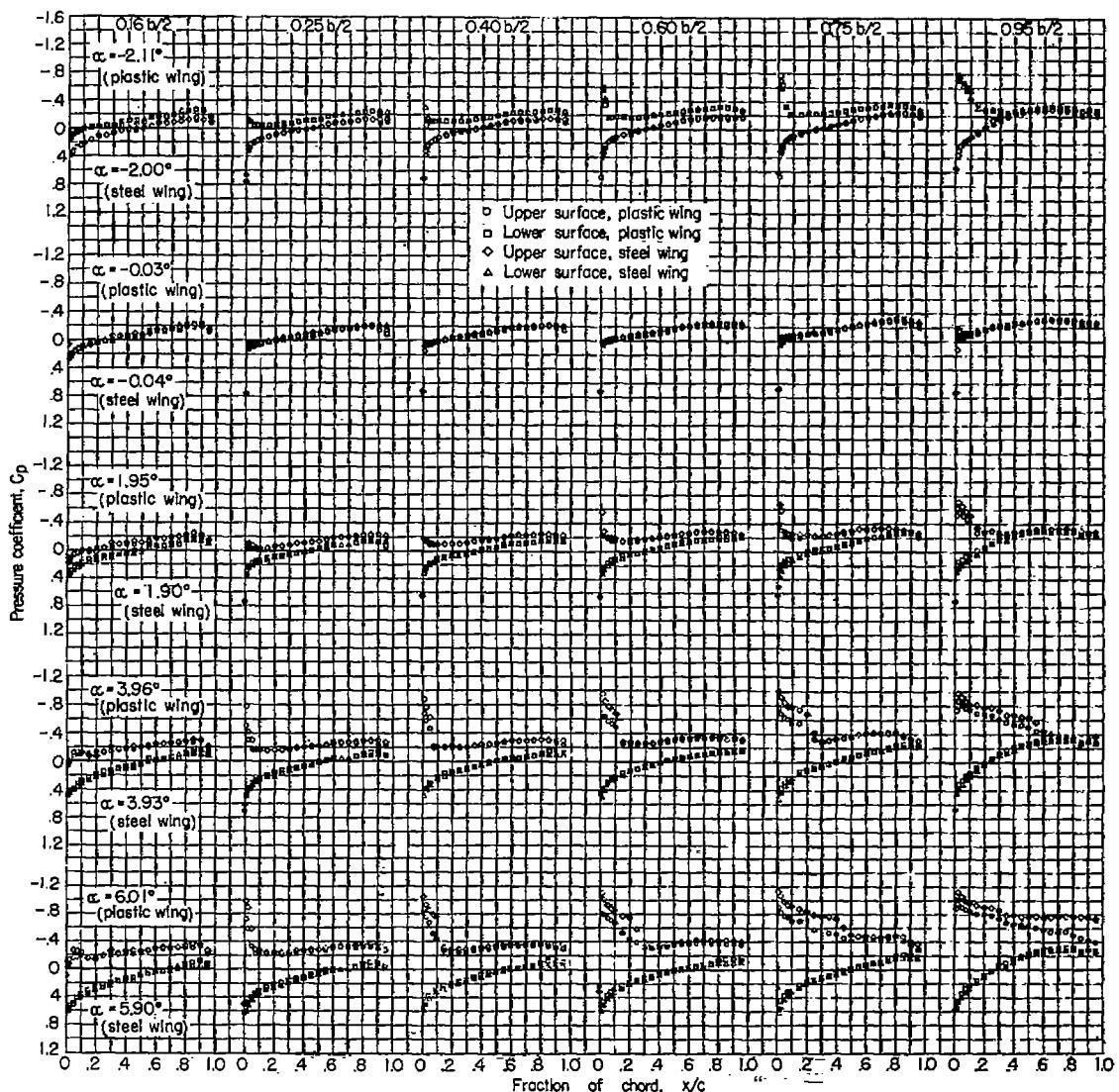
(e) $M = 1.00$.

Figure &.- Continued.

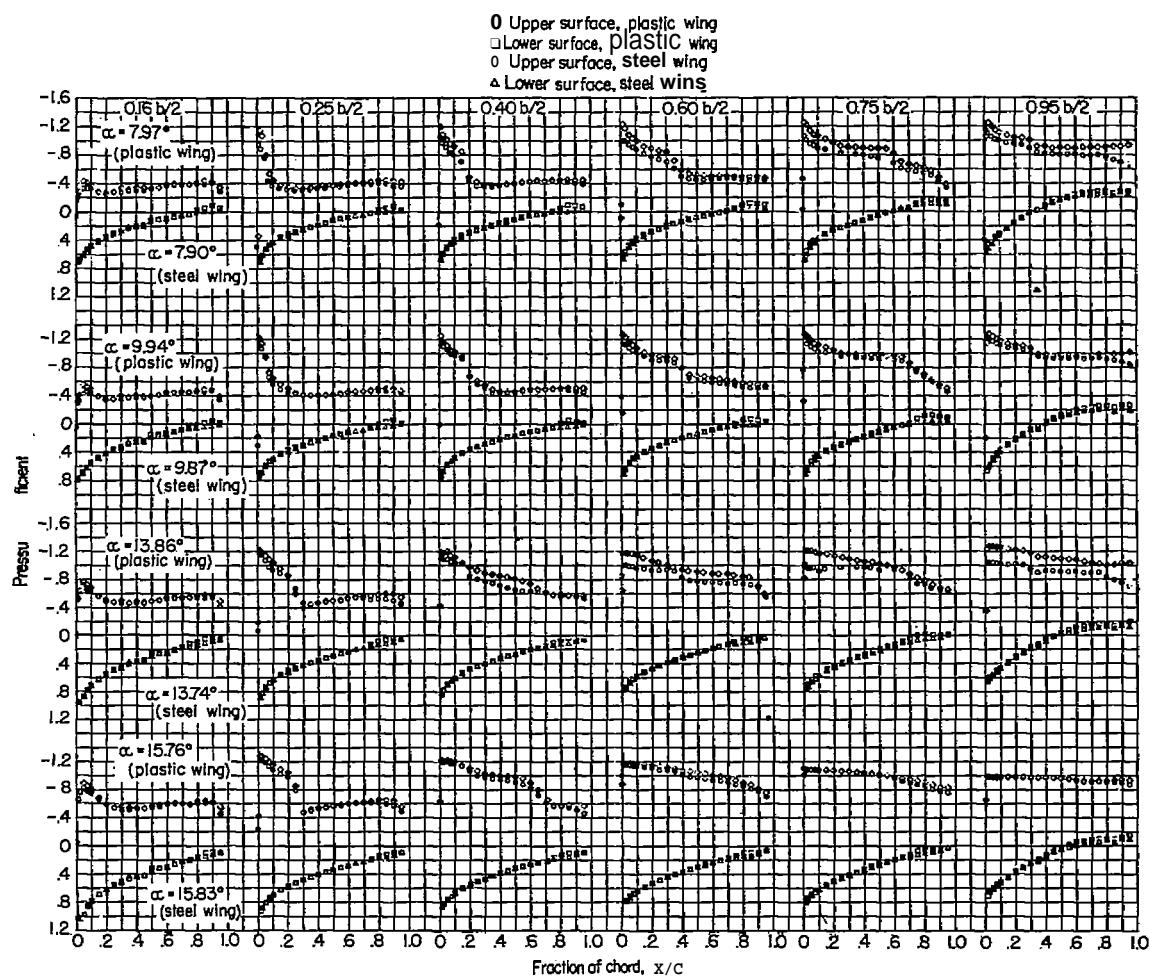
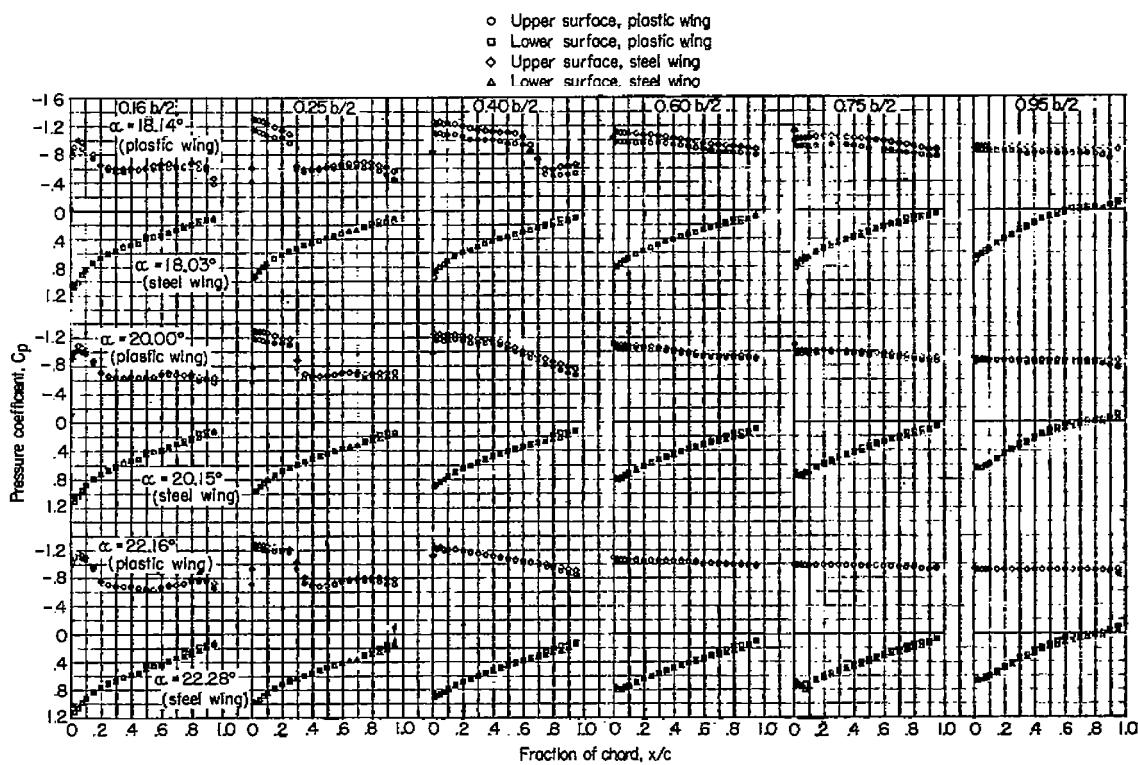
(e) $M = 1.00$, continued.

Figure 4. - Continued.



(e) $M = 1.00$, concluded.

Figure 4.- Continued.

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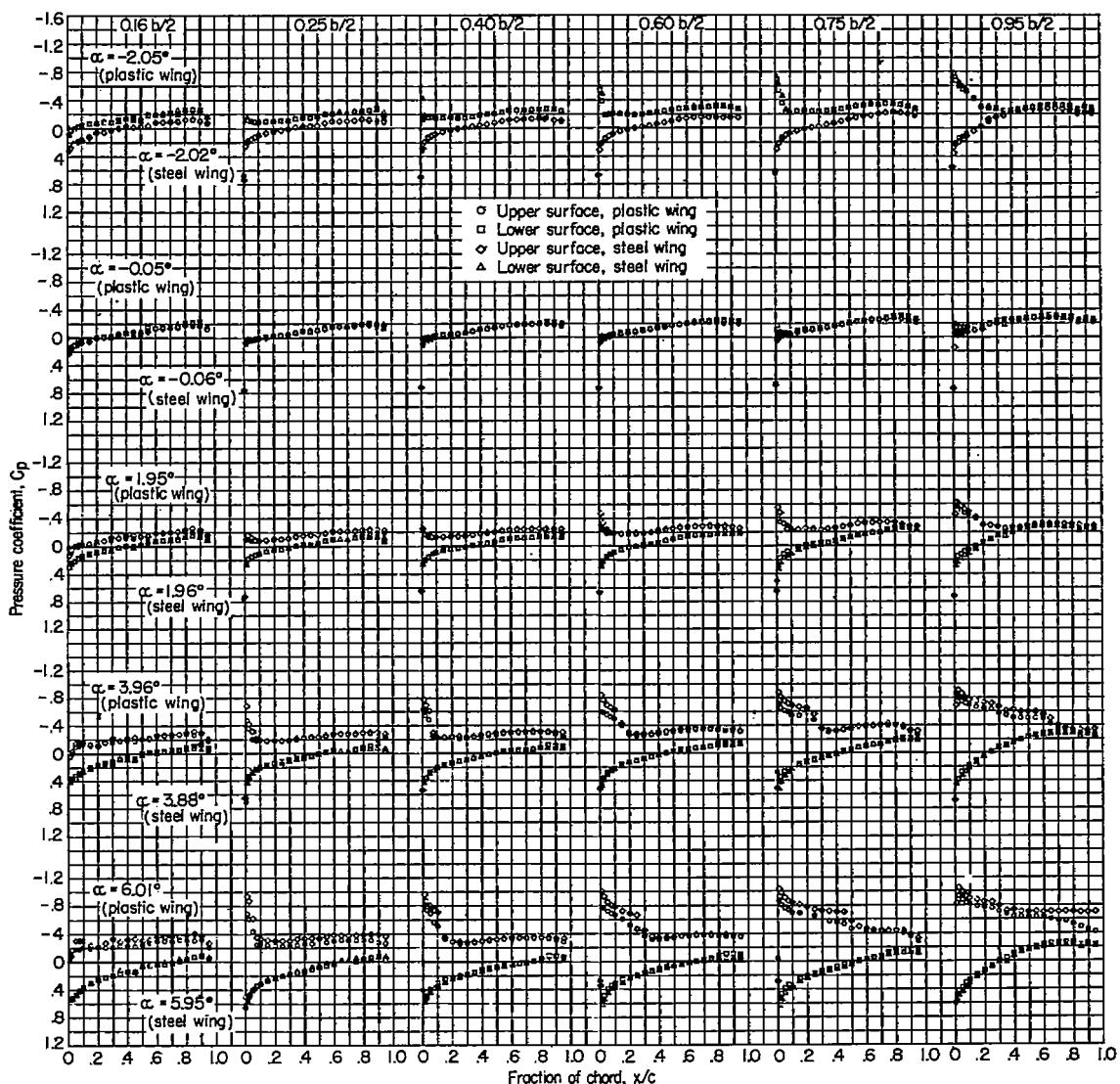
~~CONFIDENTIAL~~(f) $M = 1.03$.

Figure 4.- Continued.

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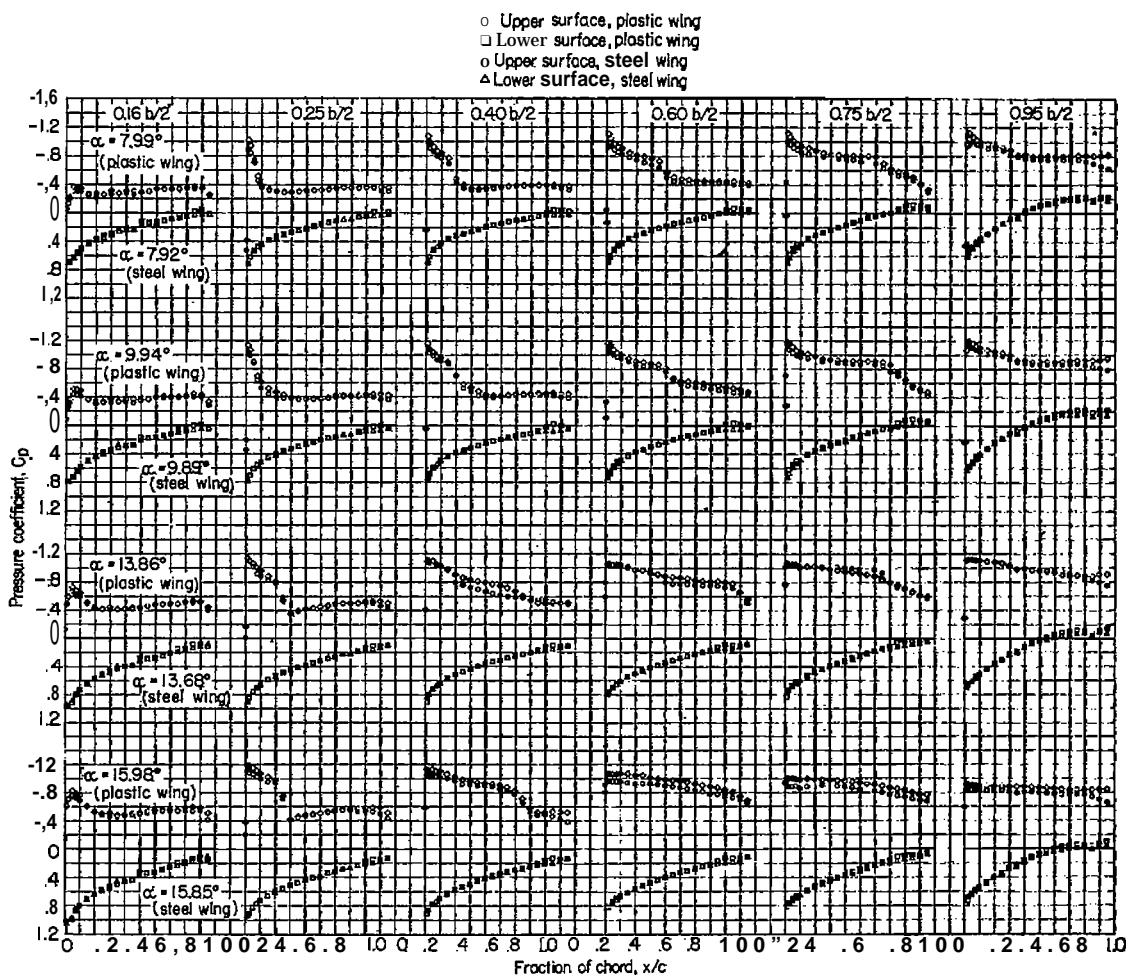
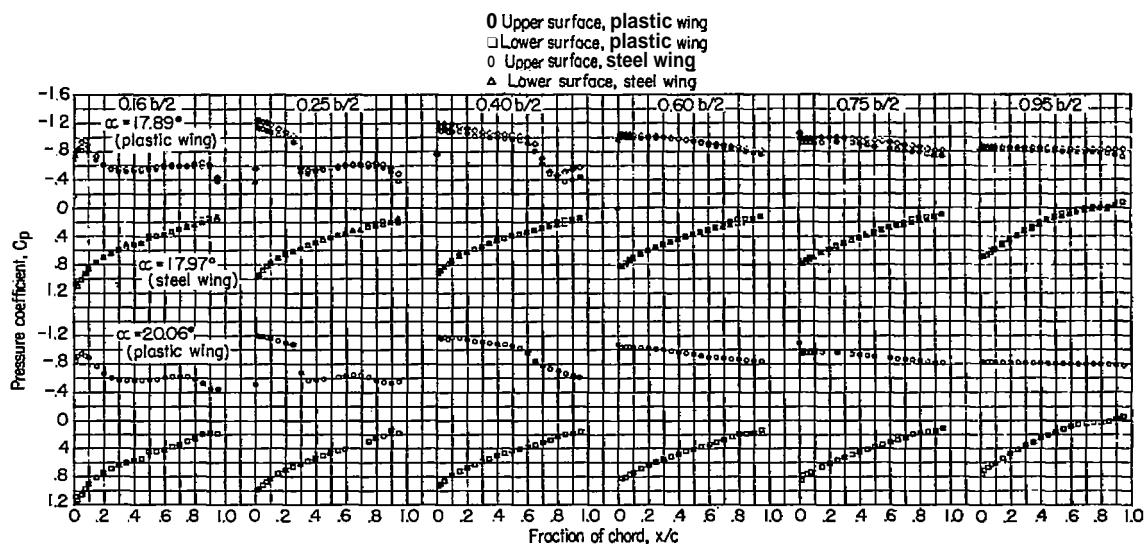
(f) $M = 1.03$, continued.

Figure 4.- Continued.



(f) $M = 1.03$, concluded.

Figure 4.- Concluded.

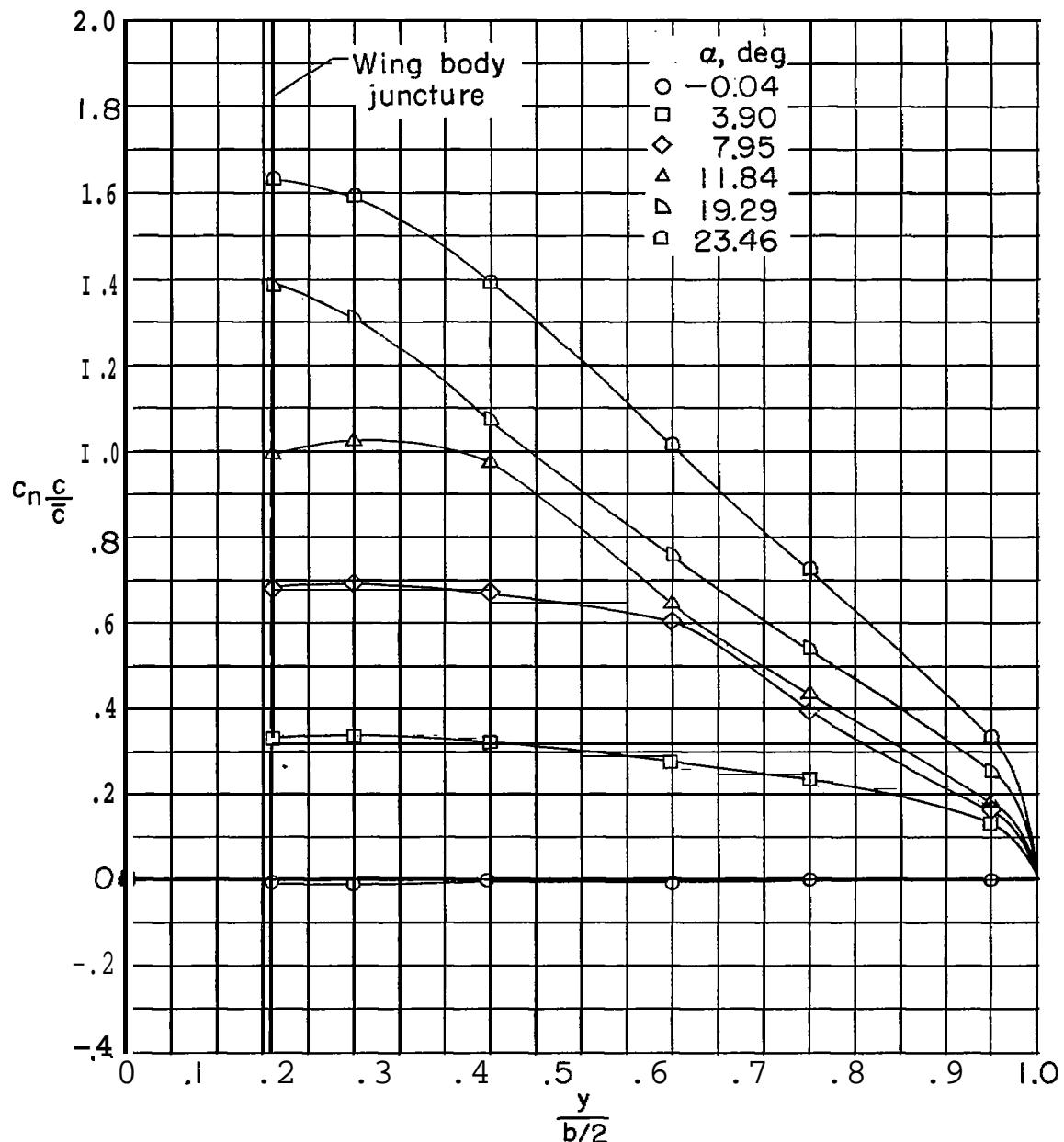
~~CONFIDENTIAL~~(a) $M = 0.80$.

Figure 5.- Spanwise variation of normal-load parameter for steel wing at various angles of-attack and Mach numbers.

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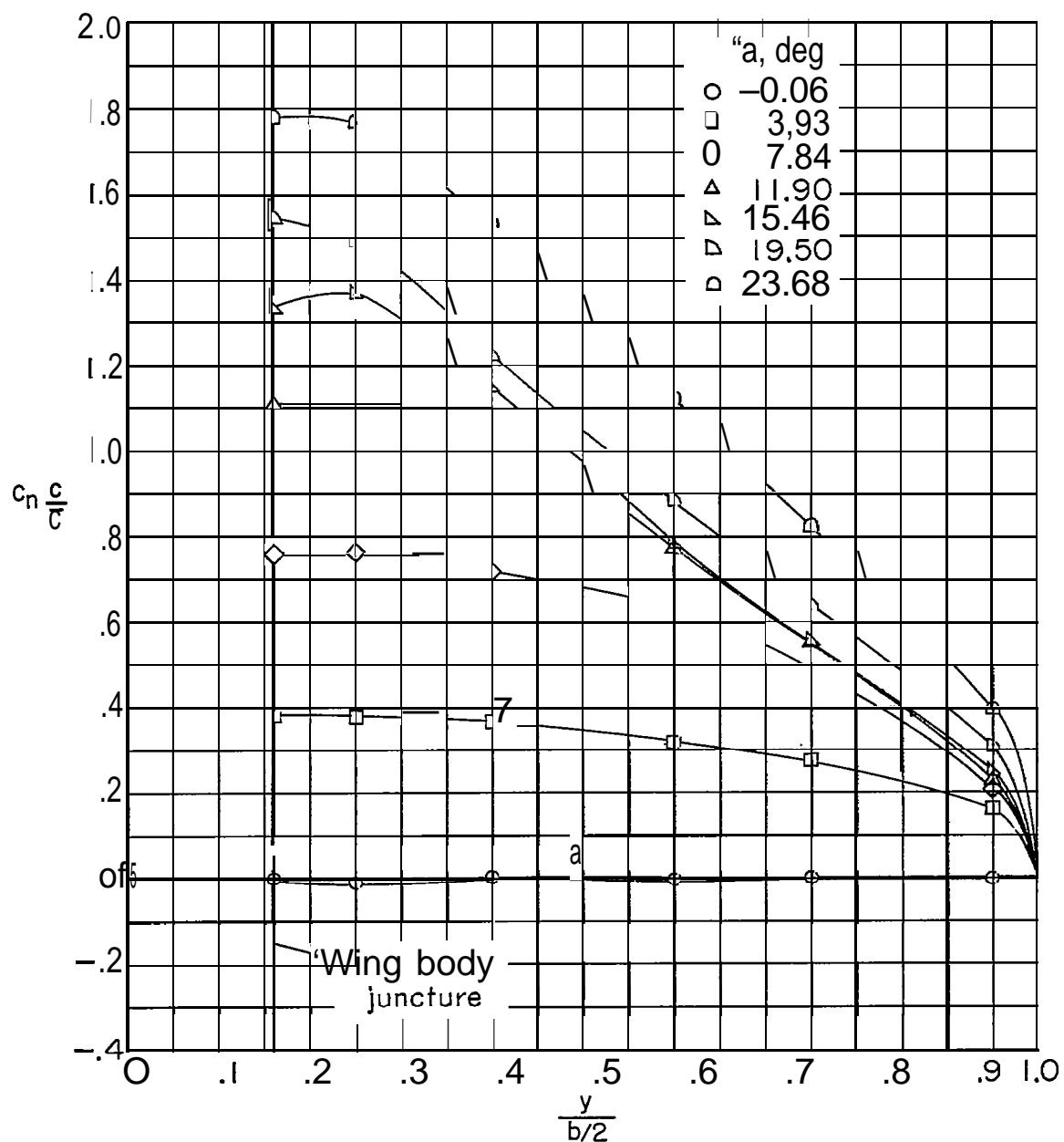
(b) $M = 0.90$.

Figure 5.- Continued.

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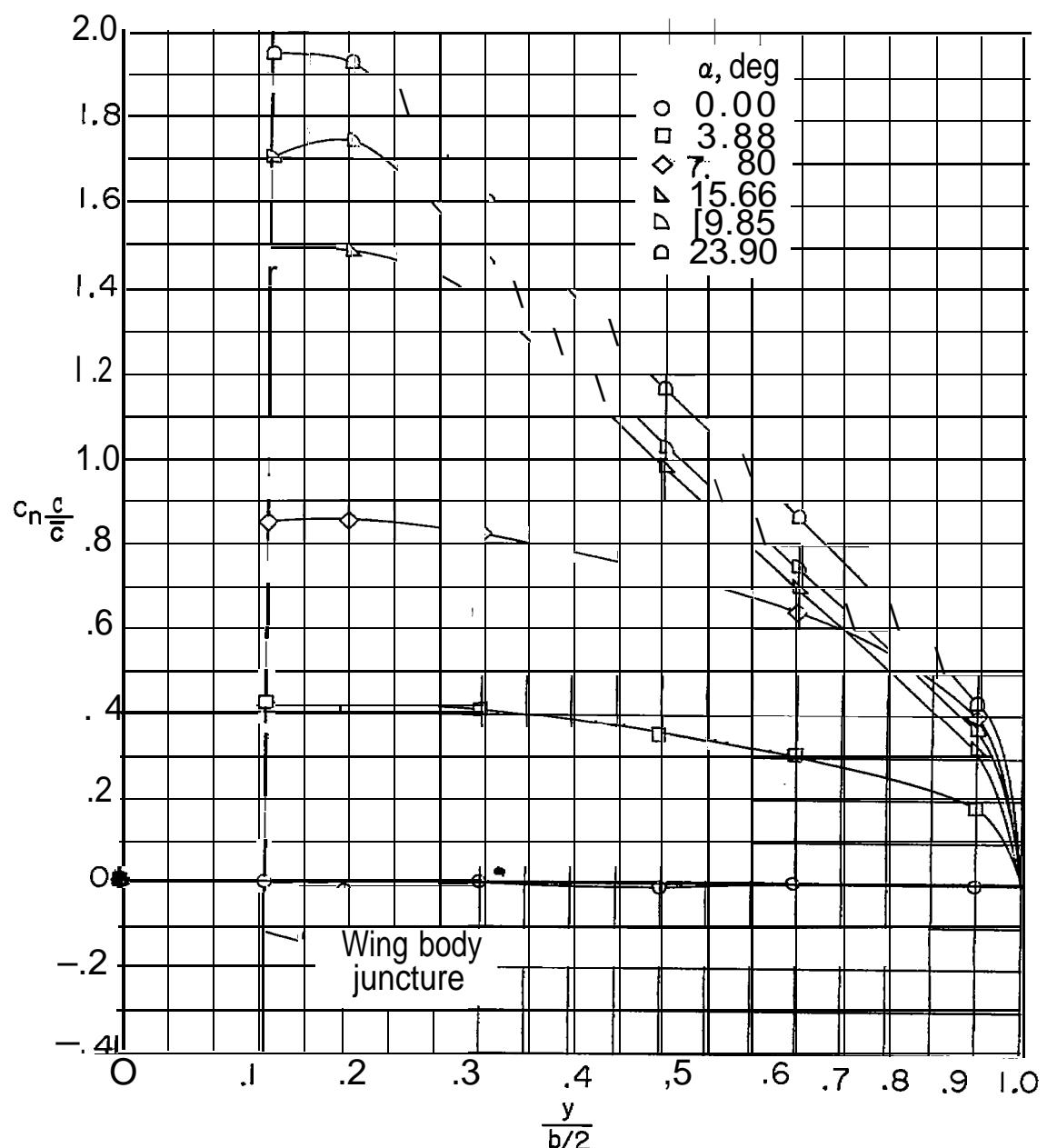
~~CONFIDENTIAL~~(c) $M = 0.94$.

Figure 5.- Continued.

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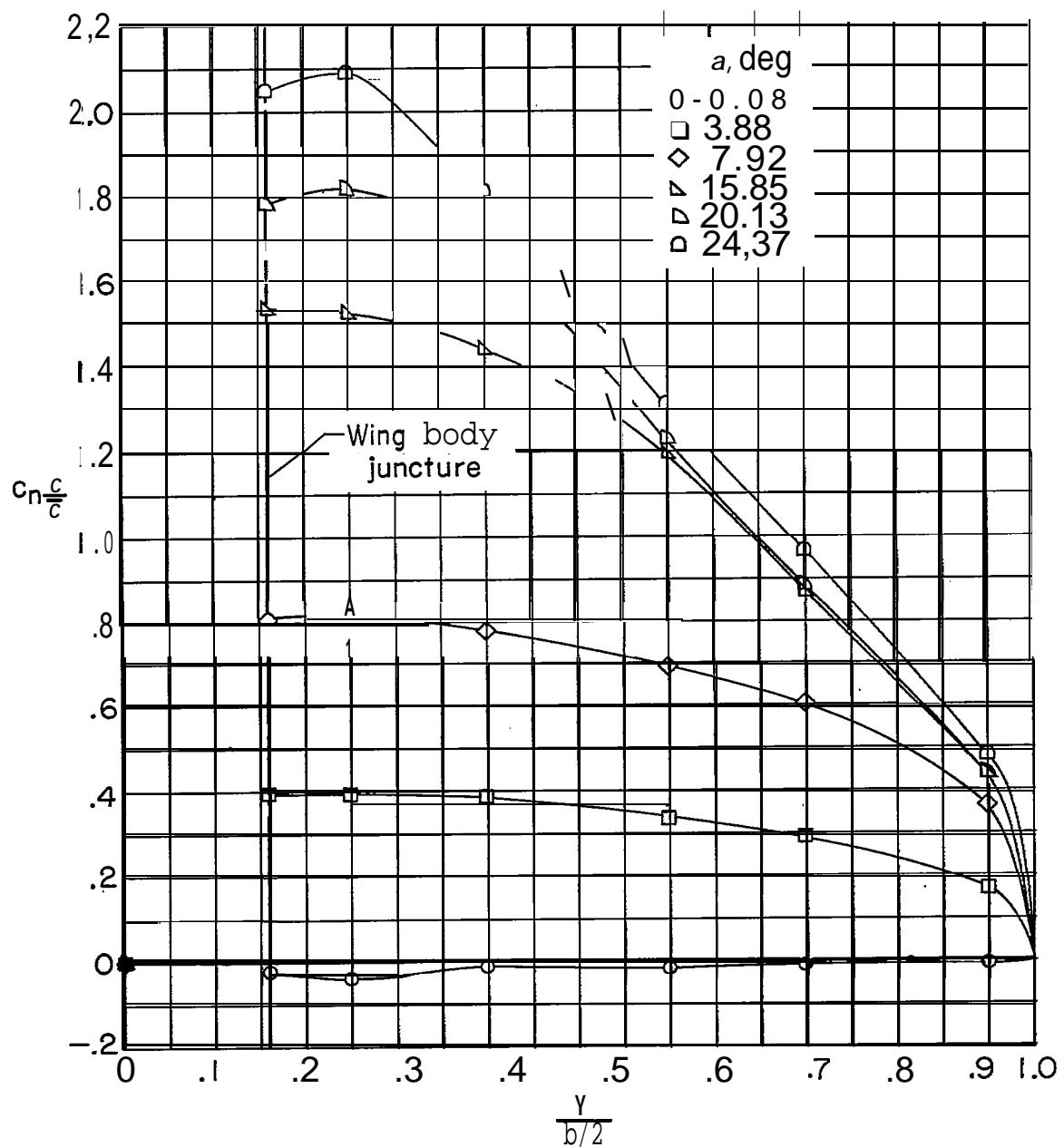
(d) $M = 0.98$.

Figure 5.- Continued.

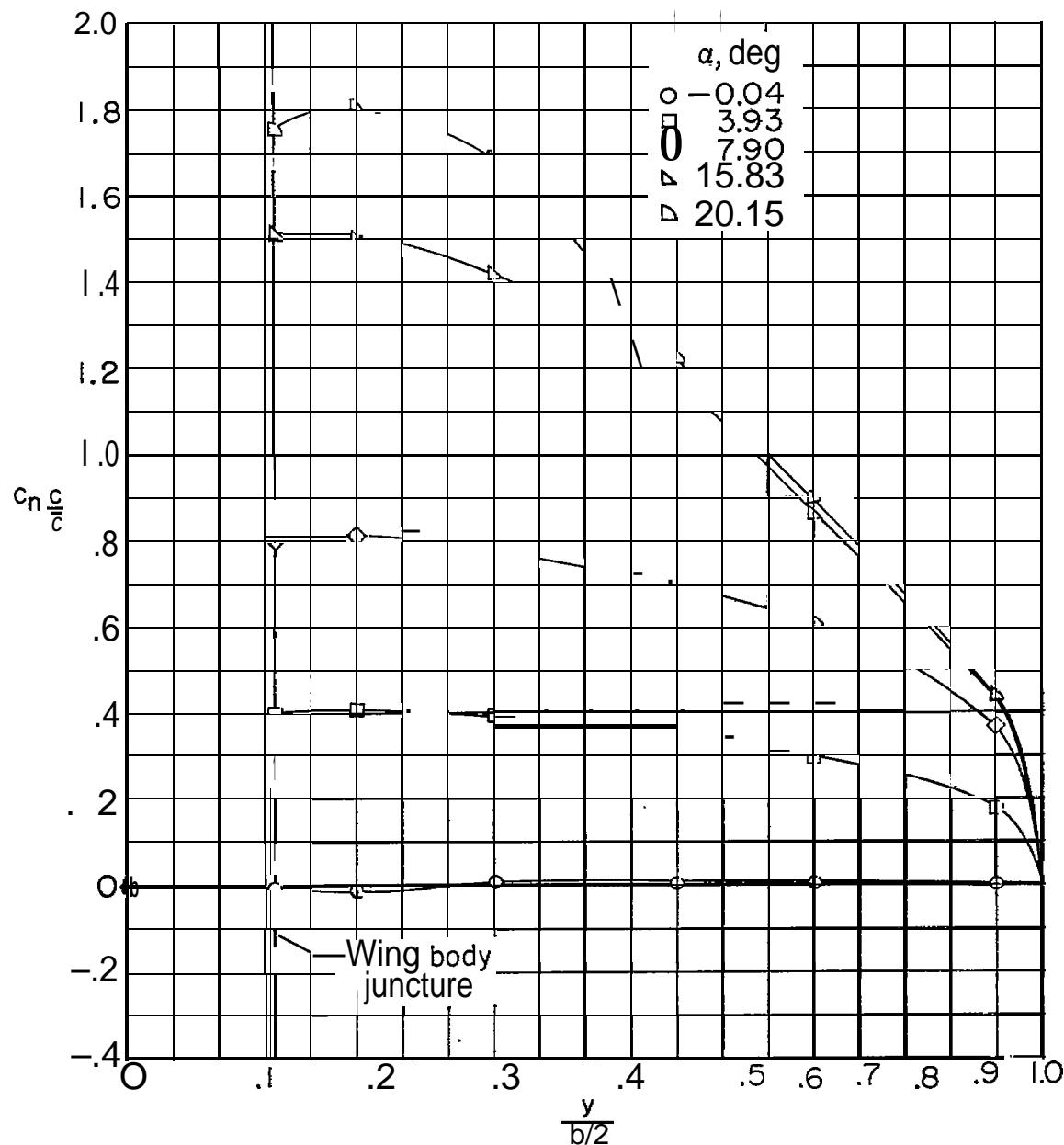
(e) $M = 1.00.$

Figure 5.- Continued.

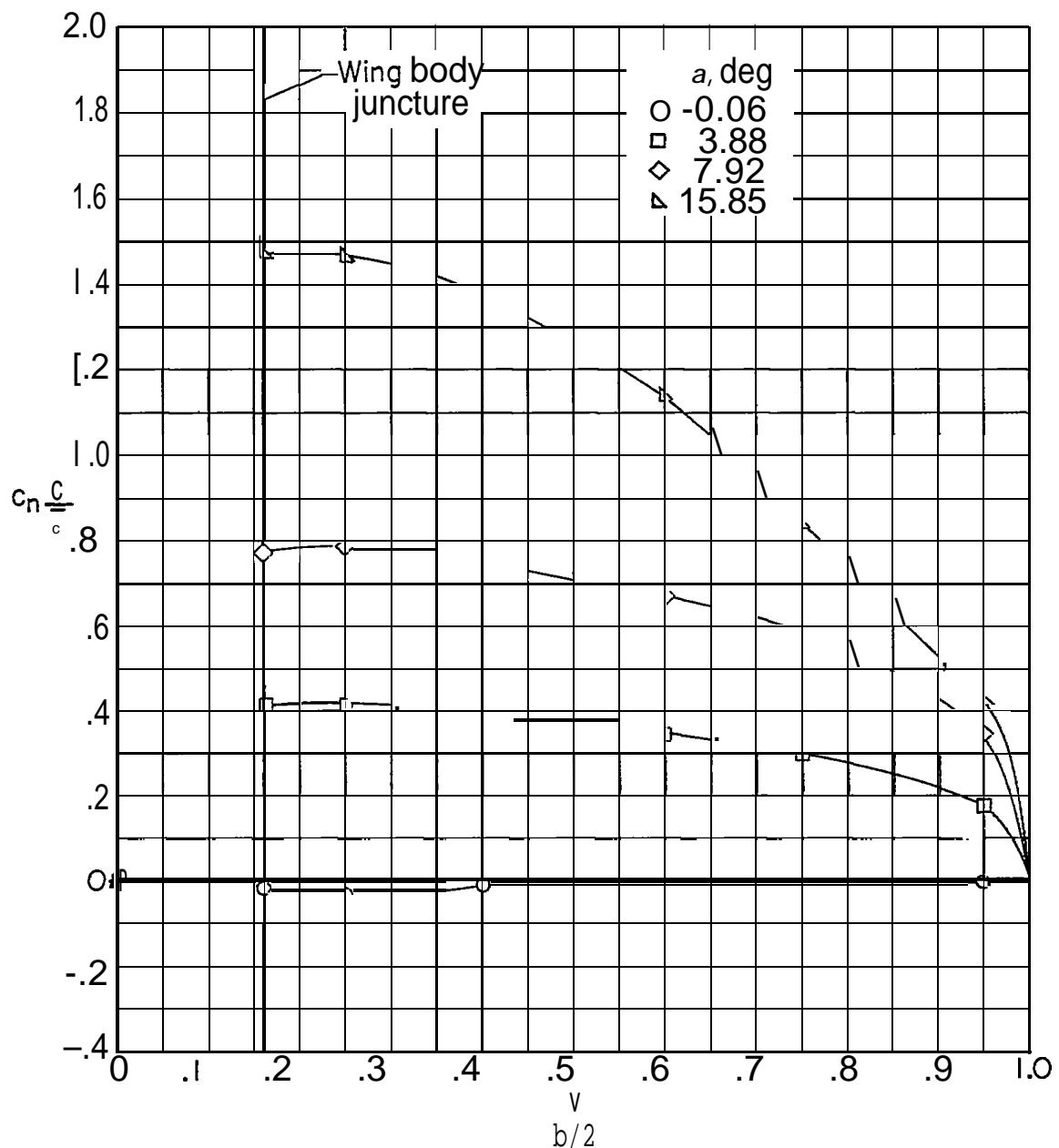
(f) $M = 1.03$.

Figure 5.- Concluded.

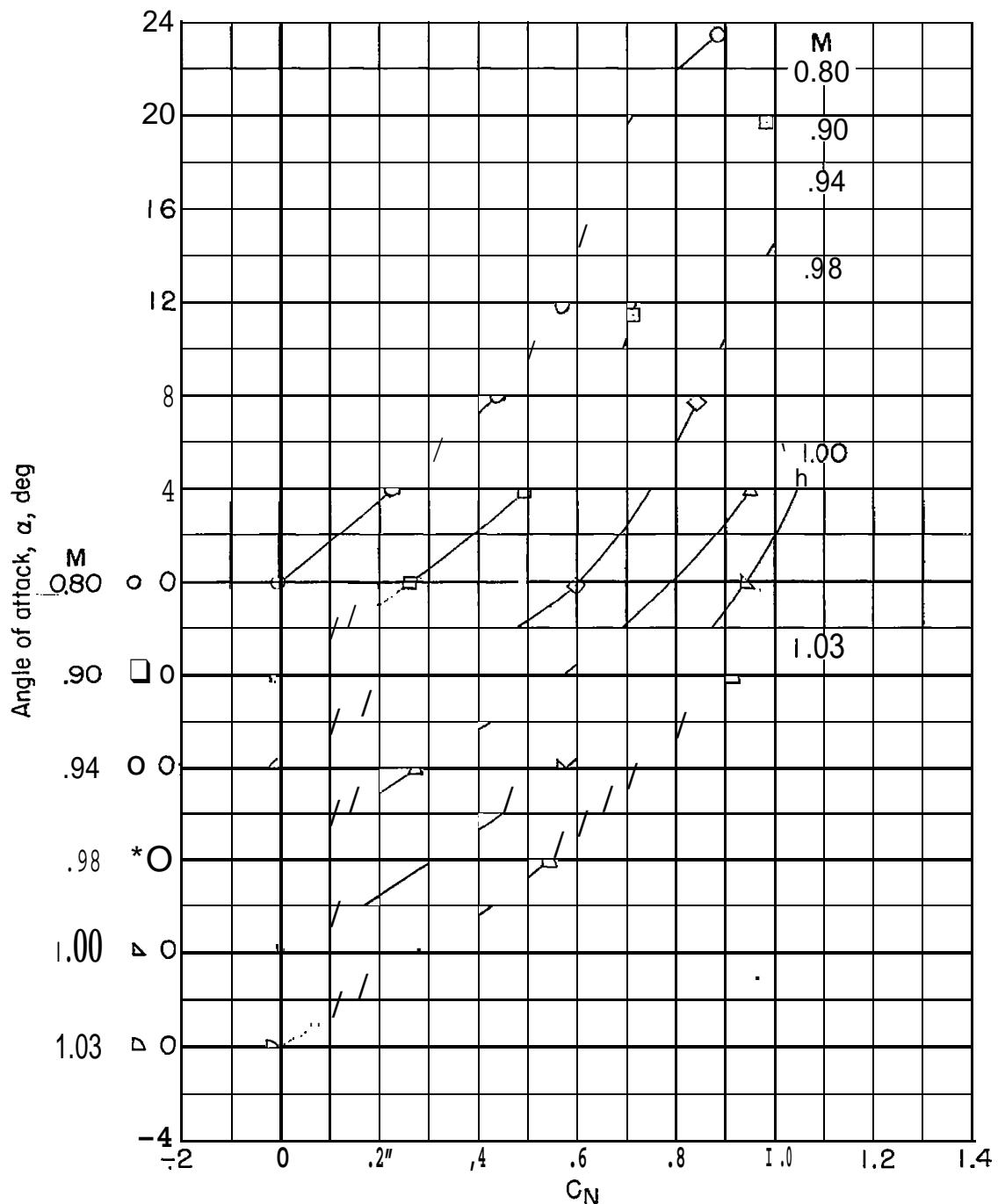


Figure 6.- Variation of angle of attack with wing normal-force coefficient for several Mach numbers. Steep wing.

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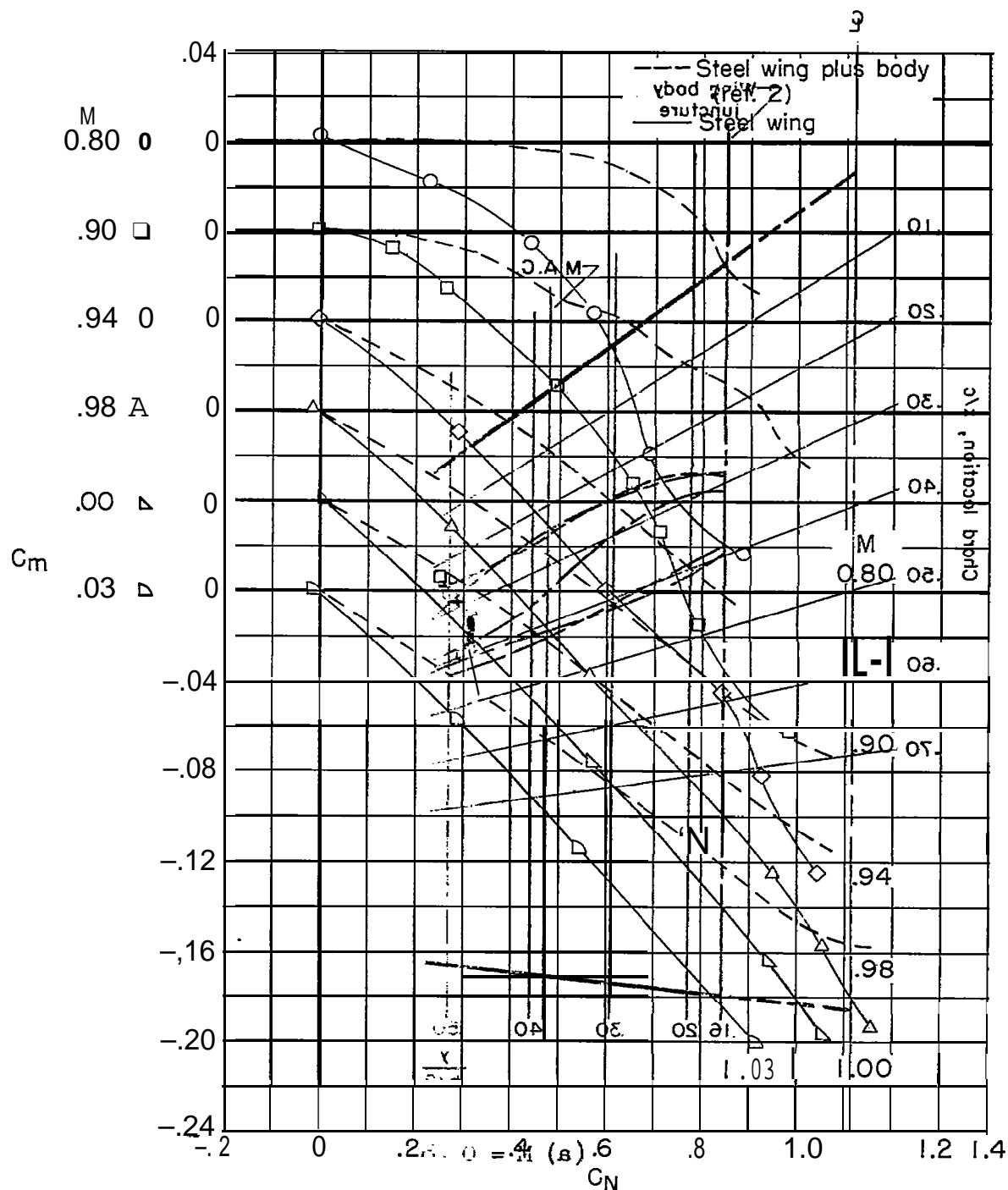


Figure 7.- Variation of wing pitching-moment coefficients with wing normal-force coefficient for several Mach numbers. Steel wing

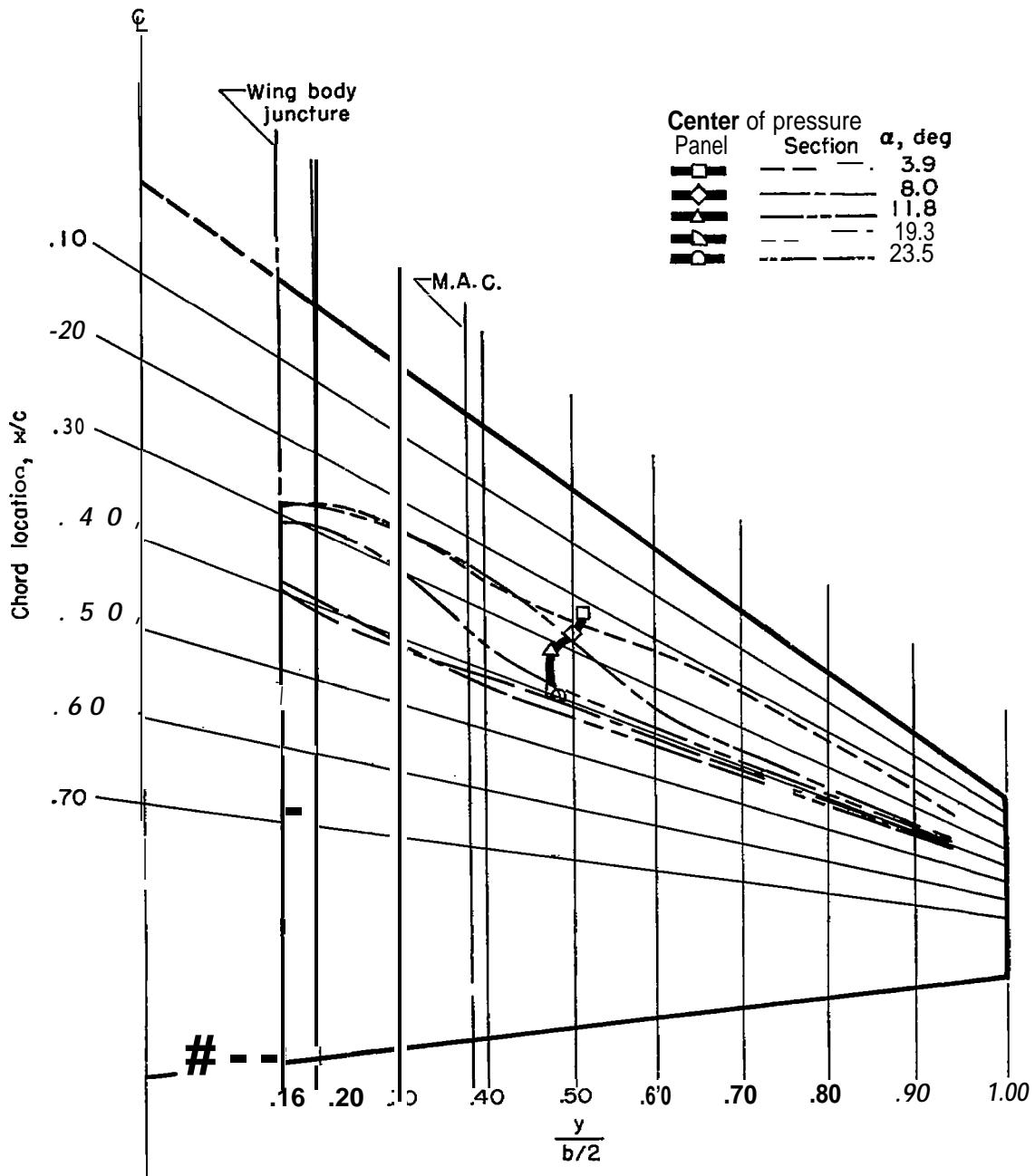
(a) $M = 0.80.$

Figure 8.- Variation of center-of-pressure location for wing panel and for local sections with angle of attack for several Mach numbers.
Steel wing.

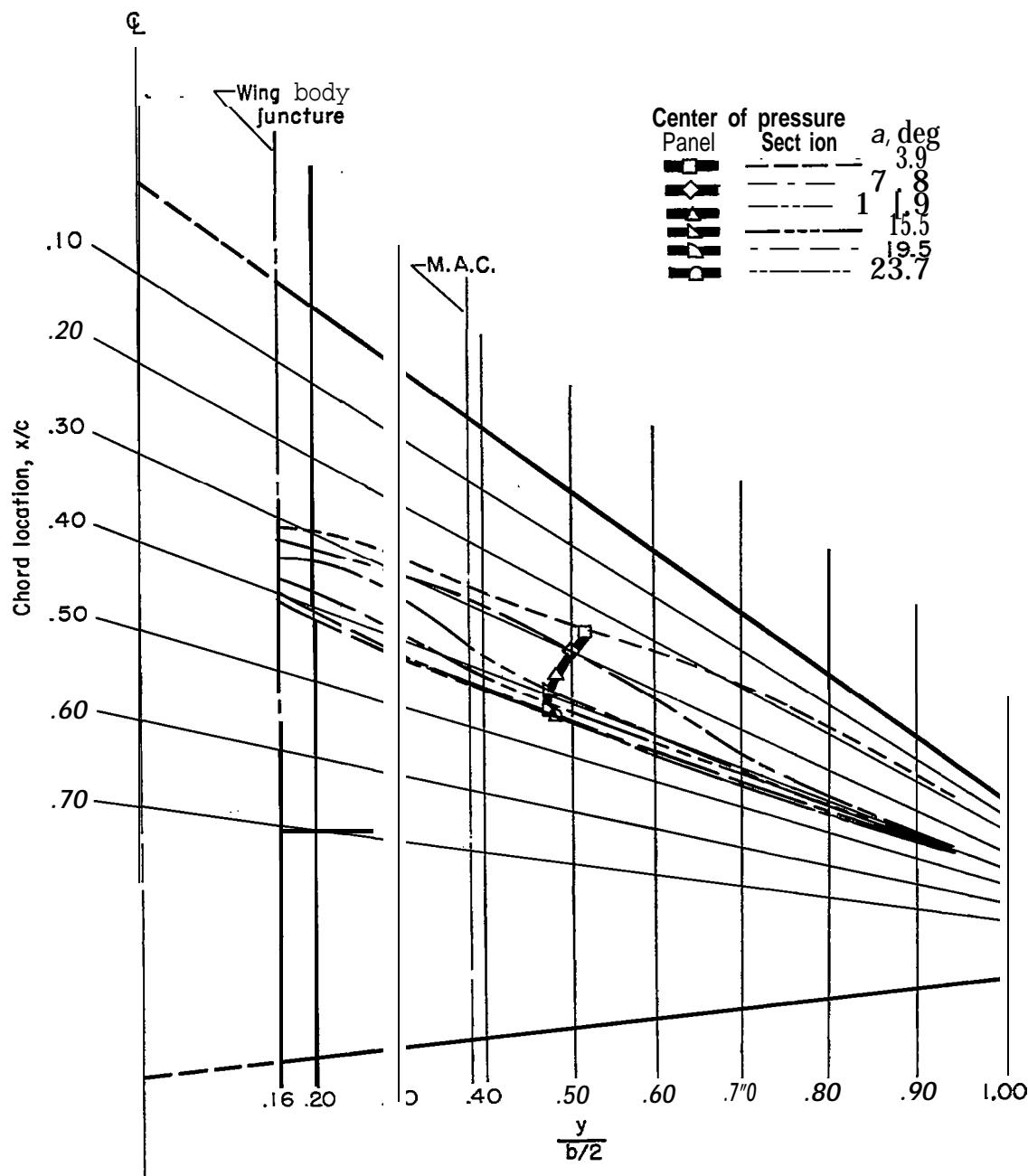
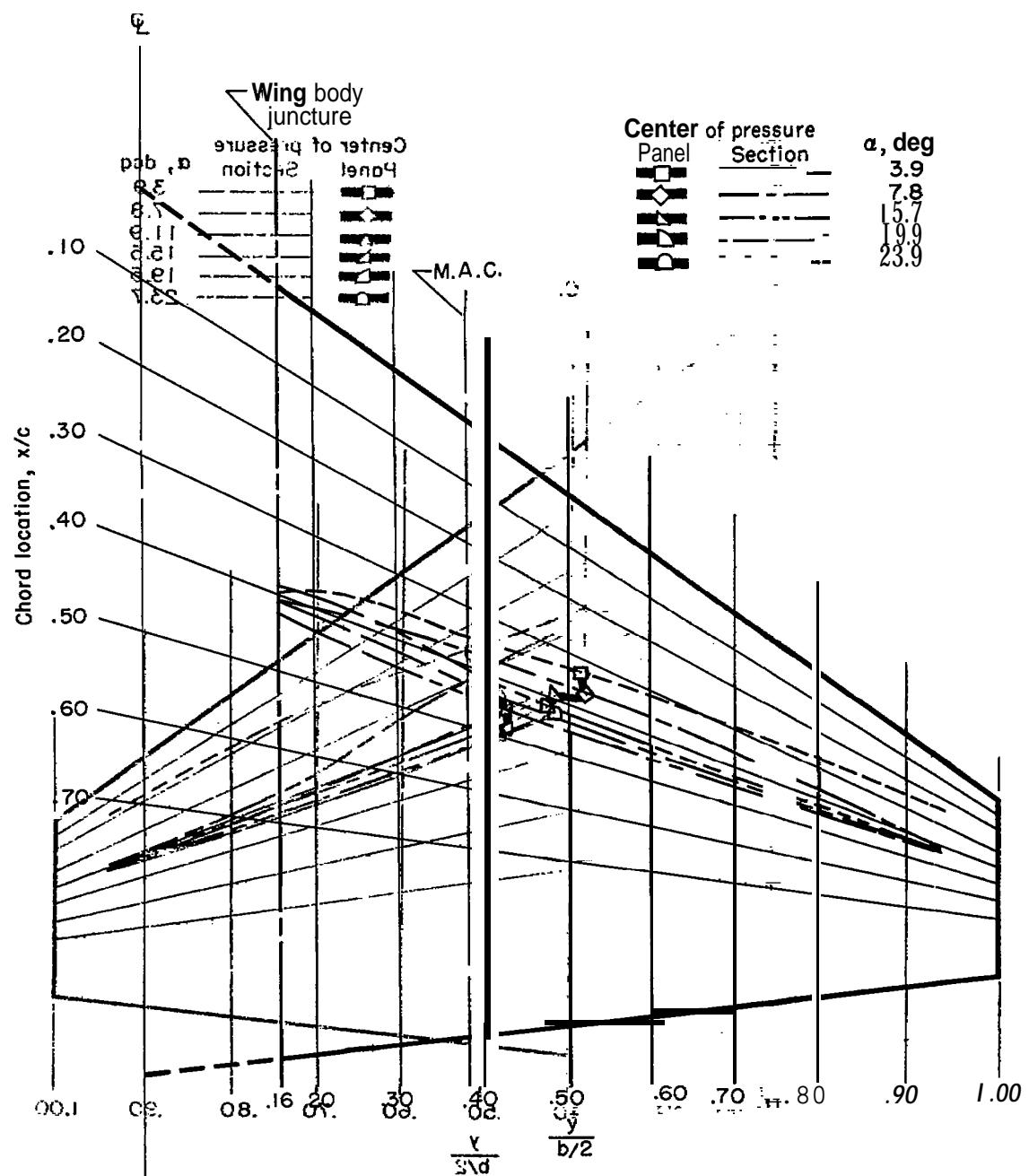
(b) $M = 0.90$.

Figure 8.- Continued.



$$(e), M = 0.94.$$

Figure 8.- Continued.

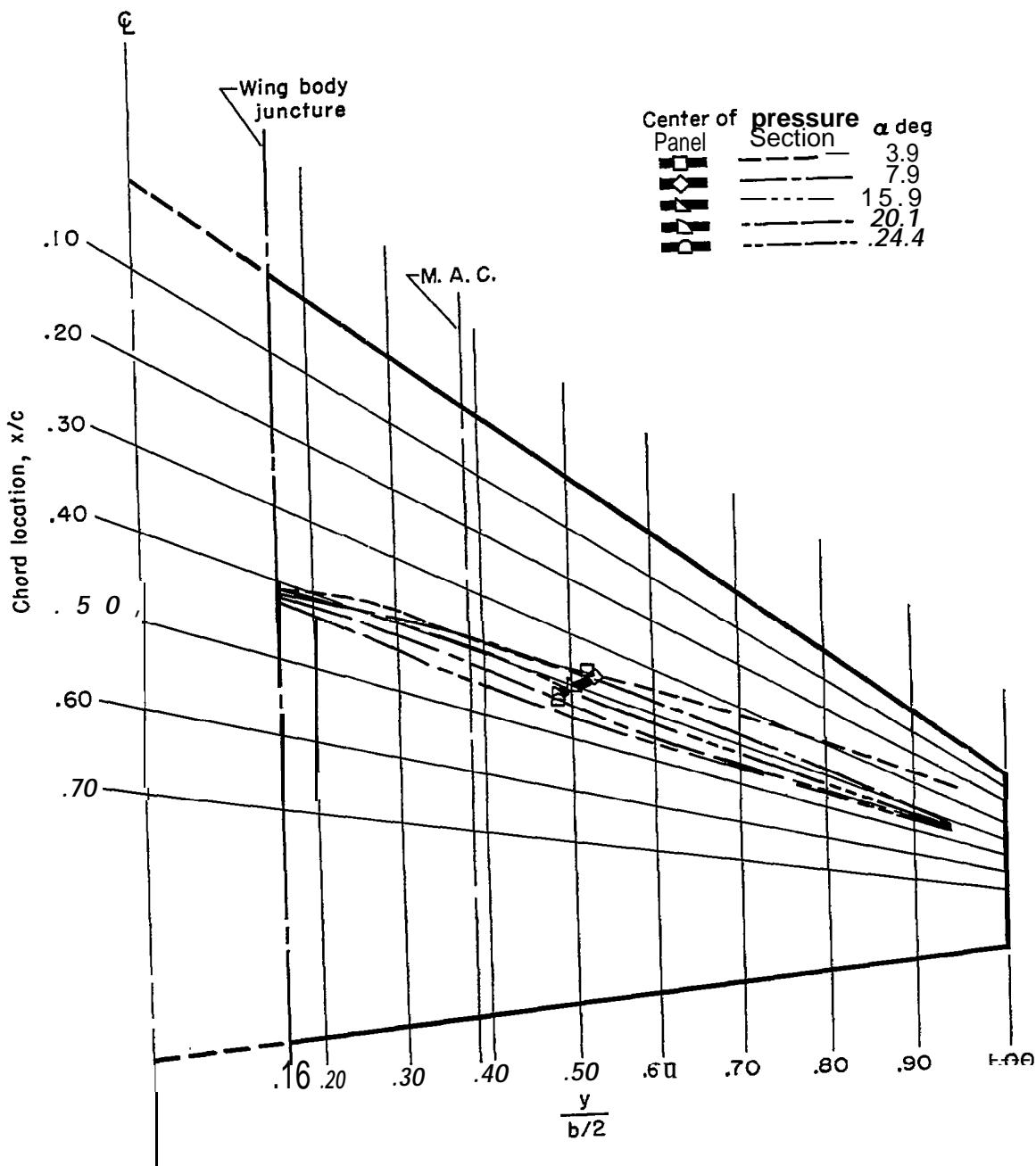
(d) $M = 0.98$.

Figure 8.- Continued.

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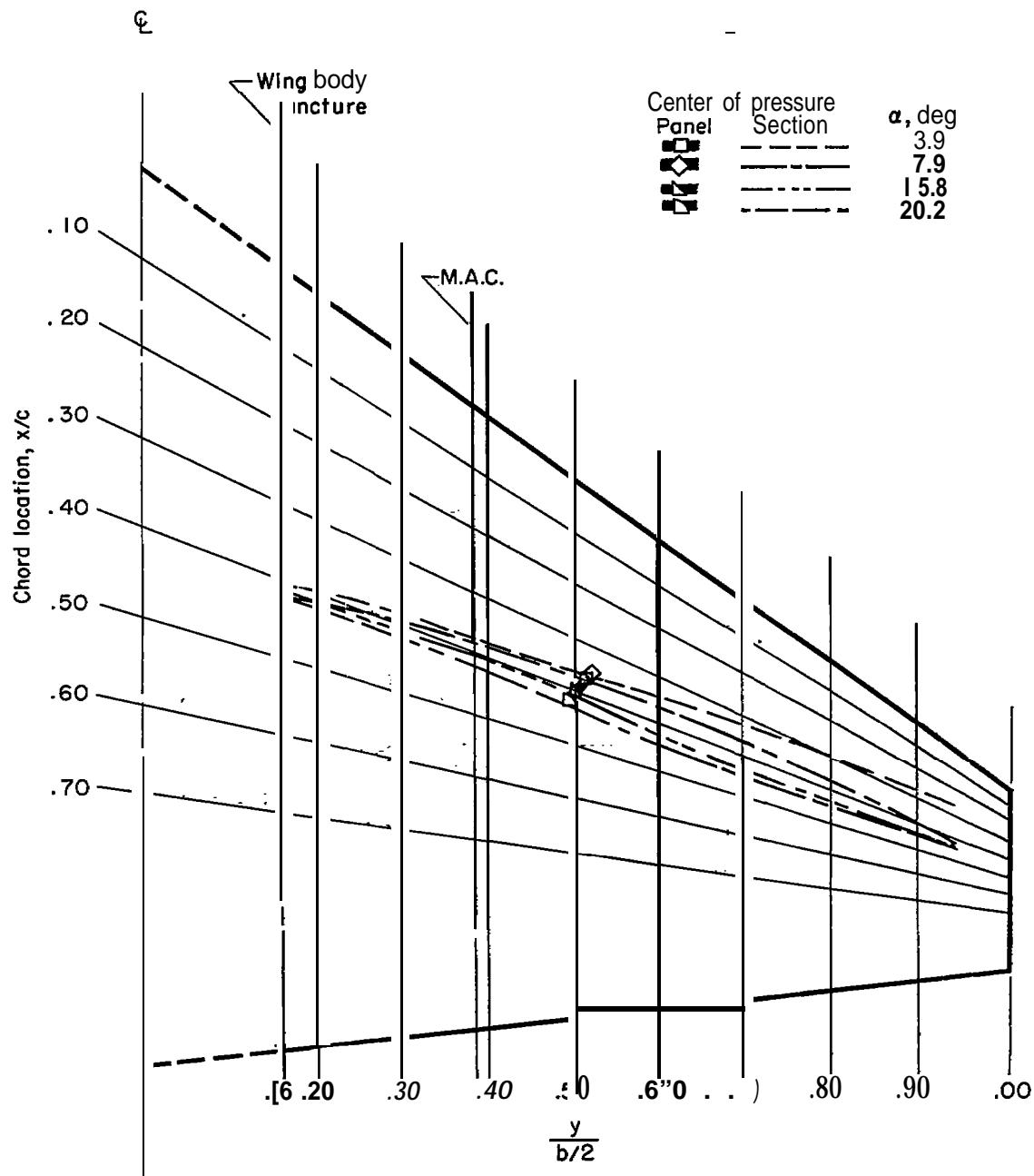


Figure 8.-Continued.

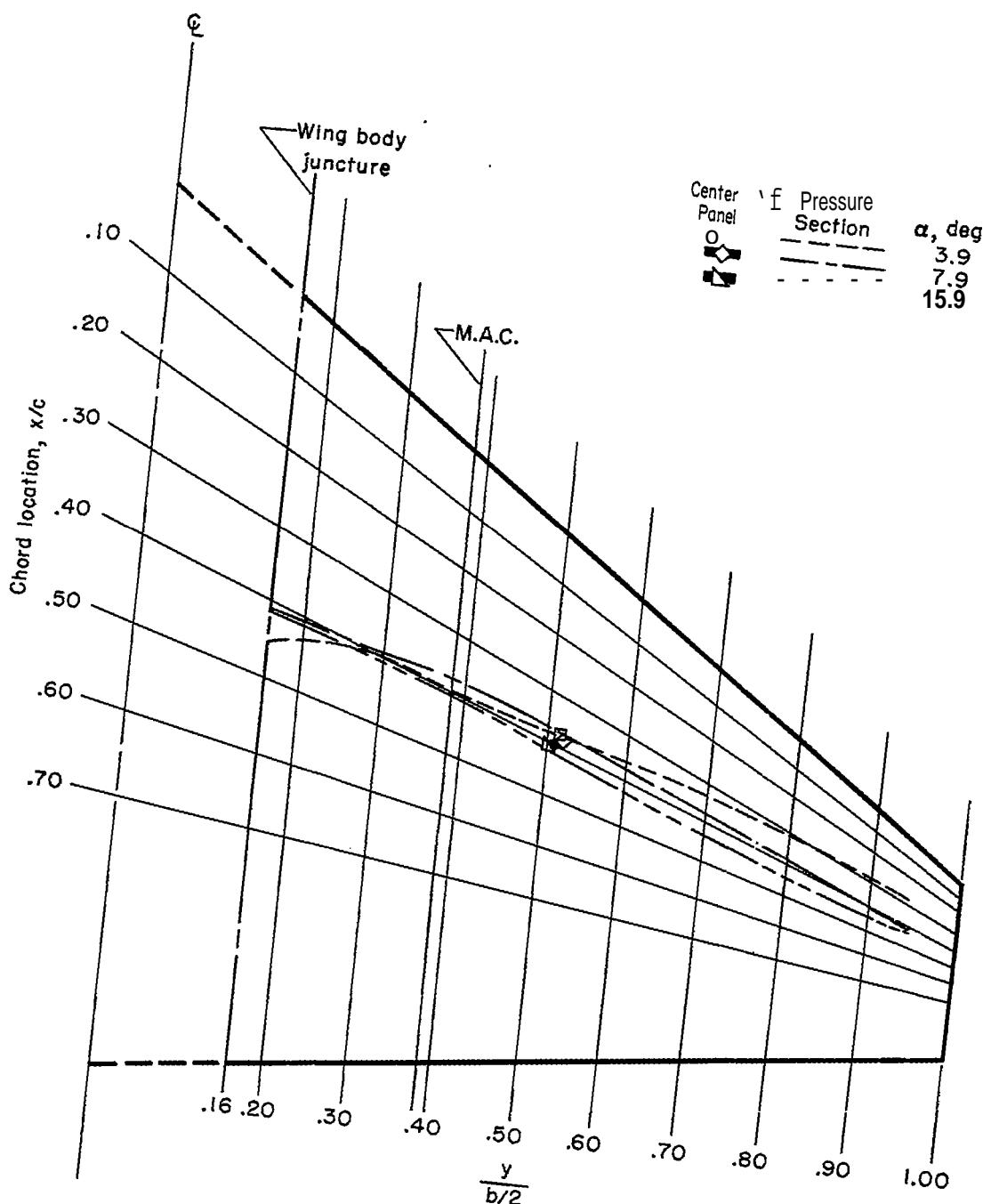
(f) $M = 1.03$.

Figure 8.- Concluded.

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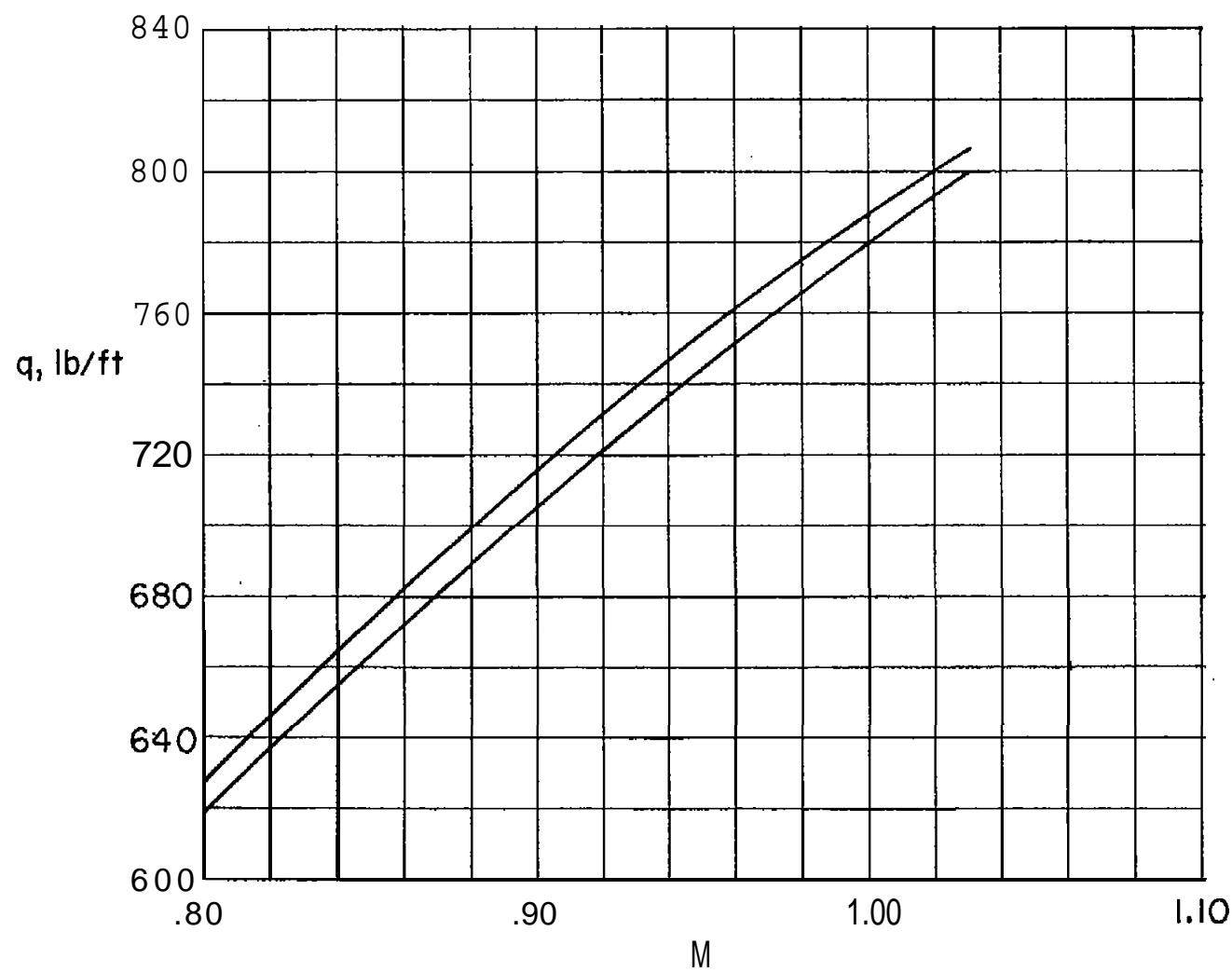


Figure 9.- Range of dynamic pressures for both steel and plastic wings far these tests.

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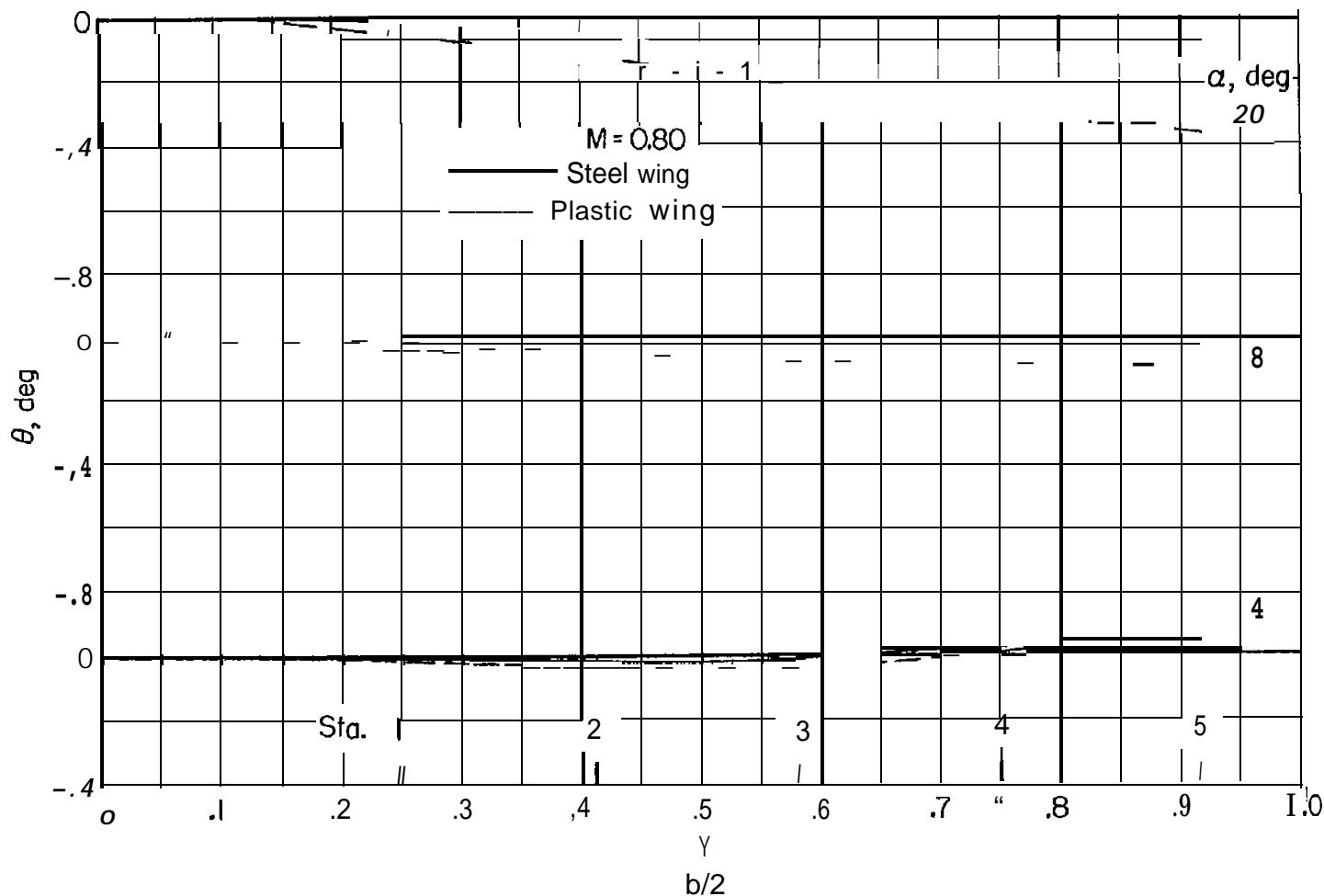
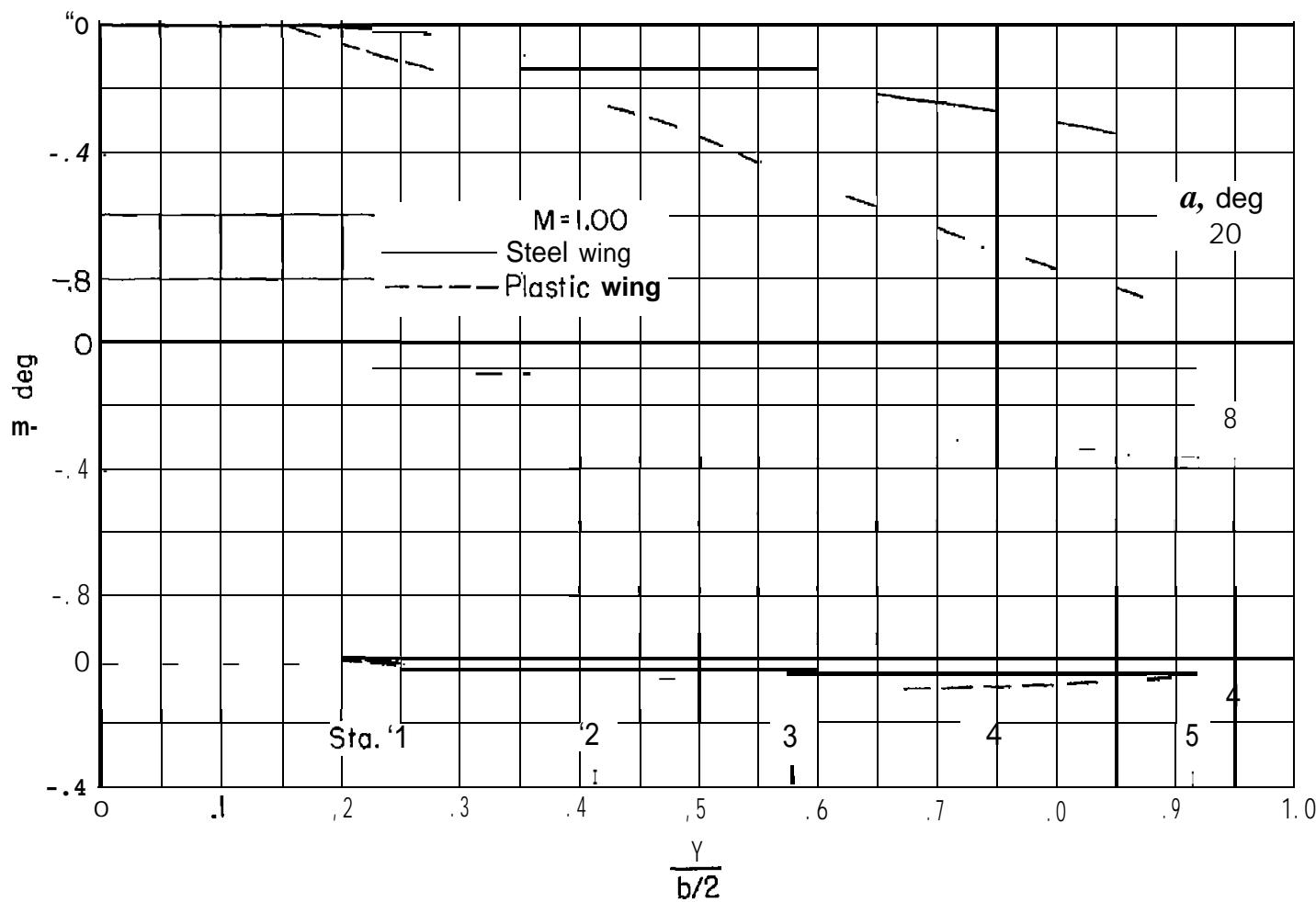
(a) $M = 0.80$.

Figure 10. - Comparison of the calculated twist distribution due to experimental aerodynamic forces and moments, measured parallel to the angle-of-attack plane.



(b) $M = 1.00.$

Figure 10. - Concluded.

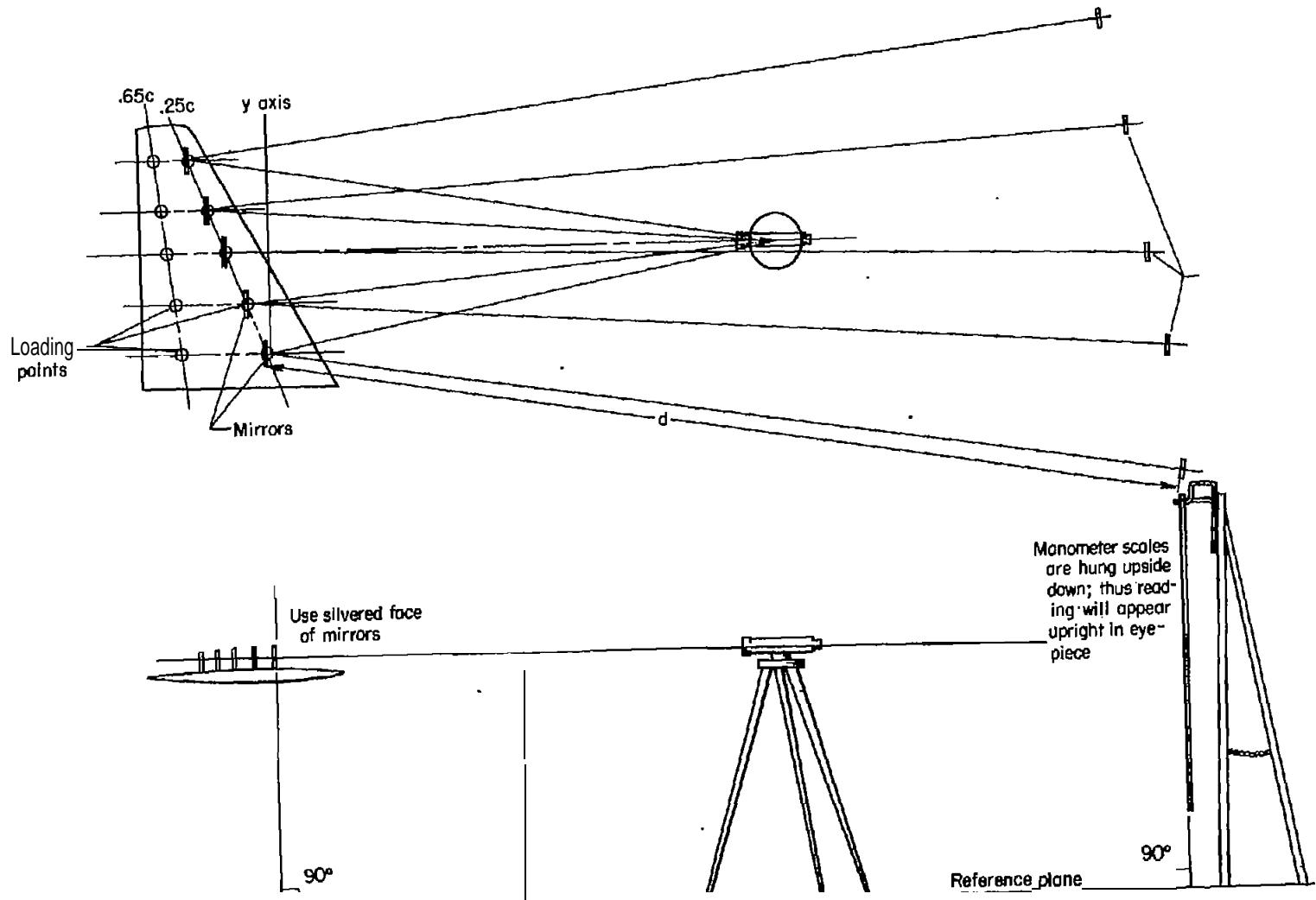


Figure 11. - Typical setup for measuring twist with mirrors.